Implementing Health Policy

by

Meera Chatterjee

Community Health Cell
Library and Information Centre
359, "Srinivasa Nilaya"
Jakkasandra 1st Main,
1st Block, Koramangala,
BANGALORE - 560 034.
Ph : 2553 15 18 / 2552 5372
e-mail : chc@sochara.org

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July '9

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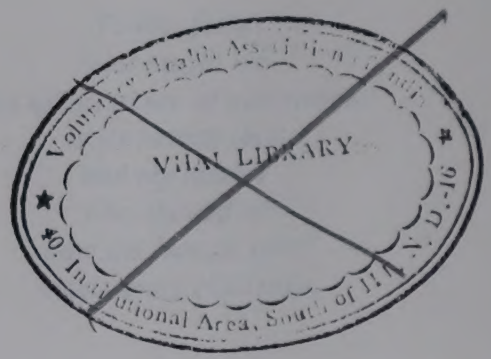
MEERA CHATTERJEE



UNDER THE AUSPICES OF THE
CENTRE FOR POLICY RESEARCH
NEW DELHI

MANOHAR
1988

ISBN-81-85054-36-3

© Centre for Policy Research
New Delhi, 1988

First Published 1988

Published by

Ramesh Jain
for Manohar Publications
1 Ansari Road, Daryaganj
New Delhi-110002

Printed by

Lohia Composing Agency
at Sunil Printers
CB-1067, 75/1, Ajay Palace
Naraina, Ring Road
New Delhi-110028

To my father
who taught me
the quintessence of government
is its human face;
and my mother
who showed us
how the human spirit
meets every challenge.

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ACKNOWLEDGEMENTS

With gratitude and affection I acknowledge the help of all those who encouraged and inspired, shared ideas and materials, engaged in discussion and correspondence, reviewed drafts and manuscript, or otherwise contributed to the spirit and substance of this work. In particular I should like to mention : Asok Mitra, Ashish Bose, P.B. Desai, Banoo Coyaji, V.N. Rao, Harcharan Singh, C. Gopalan, Alfred de Souza, D. Banerji, Roger Jeffery, Tricia Jeffery, Ravi Duggal, Hellen Ohlin, N.S. Deodhar, Srilatha Batliwala, Ranjith Senaratne, Lincoln Chen, Robert Chambers, Penny Czarra, Karuna Ahmad, M.E. Khan, Susan Rifkin, David Pyle, Jim Kocher and John Wyon.

My 'elders' and colleagues at CPR deserve special thanks : V.A. Pai Panandiker, Nirmal Mukharji, B.M. Bhatia, Pran Chopra, Bhabani Sen Gupta, Ashis Banerji, Ajay Mehra, Arun Sood and Ujjayant Chakravorty. The cooperation of the staff of CPR was invaluable. My sincere appreciation to Geetha, who typed the final manuscript with expertise and dedication, and to Kawaljit Kumar who has seen to the production of this book.

Malay, my husband, could not have been a greater "friend, philosopher and guide," nor have shared more equanimously my 'double burden.'

FOREWORD

Since the inception of health planning in India, a great deal of progress has been made. It is customary to cite the decline in mortality rates over the past 40 years, the eradication or control of some major diseases, and the growth in health infrastructure and manpower. Perhaps more important, progress has been made in the realisation that social, economic, cultural and political factors underlie the serious health problems that continue to plague the country.

In 1982, the Government of India issued a Statement of National Health Policy in recognition of the importance of this subject for national development. In calling for radical change in the established pattern of health care in the country, the Statement paid heed to the need to reshape the ecology of health and broaden the practice of health planning beyond the traditional confines of medical service provision. The Statement embodies concepts of social justice and democratisation and espouses certain principles which are novel to the field of health in the country, such as community involvement in health care and public-private cooperation. Having made such a Statement, the government faces the challenge of putting into action its various proposals.

The present study by Dr. Meera Chatterjee sets out to analyse the Policy Statement within the context of health and health services in the country, and to draw attention to critical issues facing its implementation. It ranges broadly over demographic, social, economic and political parameters of health, and focuses specifically on several important topics. In order to improve national health, programmes must focus on those who are most vulnerable, the poor and women and children. The organisation of these programmes is crucial. The relationship of private 'actors' to public system must be defined, and the role and limitations of "appropriate"

technology understood. Certain areas traditionally outside the health sector, such as nutrition, cannot be excluded from considerations of health. And finally, resource availability and allocations are of the utmost importance to health development.

The work seeks to increase the awareness of administrators, politicians and the public of needs, possibilities and obstacles to health development, and stimulate action, thereby furthering the cause of national health.

Centre for Policy Research
January 1986

V.A. PAI PANANDIKER
DIRECTOR

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CHAPTER 1

NATIONAL HEALTH POLICY: AN INTRODUCTION

The enunciation of a National Health Policy by the Government of India in 1982 raised hopes among those concerned with India's poor health that the government is serious about its commitment to provide "health for all" (GOI, 1982a). The Policy Statement was the first of its kind although, over the past 40 years, a series of committees has advised the Central Government on the country's health problems and their solution. Approved by Parliament towards the end of 1983, the Policy has since been on the anvil of implementation.

The Policy is broad in its approach to health needs and possibilities, and ambitious in its goals. Besides acknowledging many of the mistakes of the past and calling for their redress, it embodies concepts of social justice and democratisation which have been eclipsed in the process of health development to date. Sceptics may hold that, like other proposals espousing equality and social transformation, the National Health Policy is a Machiavellian stroke—that the Government does not at all intend to implement it. Others may view the Policy as grandiose and over-ambitious—impossible to implement. However, given the undeniable need for a massive and concerted attack on national health problems—which requires a departure from entrenched ways—the Policy can act as a stimulus for health planners and practitioners to formulate a strategy for its implementation. This work aims to identify aspects of the Policy

which are crucial to national health, and discuss how these can best be implemented.

The Policy's Content

The Policy Statement can be divided into several broad sections. The first is a brief description of the historical antecedents of health policy—the Indian Constitution, the Five-Year Plans, Indian culture's medical heritage and past achievements. The second is the context in which the Policy was framed—the country's health situation, the Twenty-Point Programme, and rapid population growth. The third, the 'meat' of the Policy, is a statement of its overall goal to provide health care to all and its strategy to restructure primary health care services and medical education, ensuring their coordination. The fourth is a list of specific "Problems Requiring Urgent Attention," while the fifth outlines necessary supporting services, leading, finally, to a statement of targets for service inputs and health outcomes, phased over the 15 years from 1985 to 2000.

Antecedents. As introduction, the Constitutional mandate to eliminate "poverty, ignorance and ill-health," to raise nutritional levels and improve public health, to ensure the health of workers and healthy development of children is recalled. This preamble calls attention to the framework provided by successive Five-Year Plans for the development of health infrastructure, medical research and education. In proposing "an integrated comprehensive approach towards the future development of medical education, research and health services" to meet the country's health needs, the Policy departs from past practice and thus provides its *raison d'etre*.

Recalling the country's ancient medical heritage, the Policy Statement cites the impact of allopathic medicine. Overall mortality has been reduced by half, and major diseases such as smallpox, plague, cholera and malaria have either been eradicated or substantially controlled since Independence. An extensive network of curative and teaching institutions has been developed and a large 'stock' of health personnel exists. Indigenous capacity for the manufacture of medical supplies and equipment has also been established.

However, the shortcomings of the past are reflected in the ensuing description of the prevailing health situation: rapid population growth; high mortality among women, infants and children; extensive malnutrition; a high incidence of blindness, leprosy, tuberculosis and other infectious diseases; a lack of access of rural people to potable water and basic sanitation; and inadequate trained birth attendance. The Statement lays the blame for this poor health situation on the adoption of a "hospital-based, curative approach to health services and manpower," which has been "at the cost of providing comprehensive primary health care to all," and to the neglect of preventive, promotive, rehabilitative and public health measures. The curative approach is deemed "inappropriate" and "irrelevant" to the country's needs, and is blamed for enhancing dependency and weakening the community's capacity to cope with its problems "instead of improving awareness and building up self-reliance." It is also held responsible for creating a cultural gap between the people and personnel providing care. As a remedy, it is suggested that achieving satisfactory health status calls for "involving the community in the identification of their health needs and priorities as well as in the implementation and management" of programmes.

The need for health policy to take into account the Twenty-Point Programme is then suggested. The programme gives priority to family planning; universal primary health facilities; control of leprosy, TB and blindness; nutrition and welfare programmes for women and children; drinking water supply; and several other health needs which are, in fact, the gist of the Policy's subsequent proposals.

Goals and Strategies. The overall goal of the Policy is the "universal provision of comprehensive primary health care services," which are "relevant," "affordable by the people" and "participatory" of community and voluntary organisations. It aims to provide "an integrated package of services to tackle the entire range of poor health conditions." It is envisioned that this will require:

(a) major modifications in the existing system of medical education and para-medical training;
(b) reorganisation of the health service infrastructure; and

(c) integration of health plans with efforts in health-related sectors, as well as with socio-economic development processes.

On the subject of medical education and training of health personnel, the Statement's major recommendation is that manpower development should concentrate on imparting a greater orientation to community health and an integrated "health team" approach. The details are left to be worked out by a separate "National Medical and Health Education Policy" which should examine the contents of medical and para-medical training in the context of national needs and priorities. This separate policy is to address itself to curriculum changes for better relationships among personnel and for their social motivation, as well as to manpower requirements, particularly with a view to correcting regional imbalances.

Reorganisation of health services is the major thrust of the Policy. The proposed "restructuring" is focused on decentralisation. The guiding principle is that the most-needed services should be closest to the community in order to ensure timely availability of medical attention. Various levels of expertise are to be deployed so that they can be optimally utilised, with a referral system providing upward linkages to increasingly specialised facilities. This strategy calls for "individual self-reliance" and active "community participation," and envisions an "extension approach" utilising community health volunteers, paramedical multipurpose workers and non-governmental organisations.

Priority Problems and Actions. The next section of the Policy Statement is devoted to eight problem areas to which priority attention is urged: nutrition, food and drug adulteration, water supply and sanitation, environmental protection, immunisation, maternal and child health, school health, and occupational health services. Little elaboration is provided though they are considered "some of the more important inputs required for improved health care." The highest priority is given to Maternal and Child Health because of the "vicious relationship between high birth rates and high infant mortality."

Supporting Activities. The concluding portion of the Statement proposes several supporting activities: health education,

information systems, essential drug and equipment production, insurance schemes, health legislation and biomedical research. Education is seen as the *sine qua non* of health action.

The Policy Statement proposes the integration of health with overall socio-economic development. It advocates the formation of committees at the Centre and in the States to help the Health department coordinate its work with the departments of Food and Agriculture, Water Supply and Sewerage, Housing, Education and Welfare, and Rural Development. At the community level an "integrated programme of rural development" including health care is favoured.

Targets. The Statement concludes by proposing that progress be monitored in relation to a number of demographic and health service coverage targets set for 1985, 1990 and 2000. Commendably, it has broken away from 'conventional' input indicators and targets of 'health facilities to be established' or 'services delivered,' and proposed more meaningful ones, such as reductions in mortality in the general population and among infants, pre-school children and mothers, and in the incidence of blindness, and increases in antenatal and delivery care, immunisation, and treatment rates for leprosy and tuberculosis. Four indicators focus specifically on fertility control—the birth rate, net reproductive rate, and family size are to be lowered through increased "effective couple protection." These indices are also to be addressed by a separate (new) National Population Policy.

Past Nonachievements

As a statement of intent, the National Health Policy is wide-ranging, almost comprehensive. To assess its future, however, one must measure it first against history. How does it compare with past prescriptions? What factors have stood in the way of fulfilment of past promises, and how does the current Policy propose to overcome these?

The Policy Statement clearly derives inspiration from some previous attempts to call attention to the health needs of the

country,* as well as from the worldwide 'Health for All' movement. Perhaps most significant was the Report of the Bhore Committee (Health Survey and Development Committee) established in 1943 (GOI, 1946). Its mandate was to "survey" health conditions and organisations and make recommendations for their development. Among its more important suggestions were :

—that no individual should lack access to medical care because of inability to pay for it;
—that medical relief and preventive health care should be urgently provided to rural people;
—that special emphasis should be placed on preventive methods;
—that health services should be as "close to the people as possible in order to ensure the maximum benefit to the community to be served;"
—that the active cooperation of people in the health programme should be sought;
—that health units should be established according to a set pattern;
—that physicians should receive three months training in social and preventive medicine; and
—that all facilities for diagnosis and treatment should be available in the health service system when it is fully developed.

As these recommendations have hardly been achieved, they have all been reiterated in the National Health Policy Statement!

In fact, the call, "health for all," was made even earlier by the National Planning Committee. The Interim Report of its Sub-committee on Health, submitted in 1940, called attention to the need to have a state-controlled, free health system which balanced curative and preventive care (National Planning Committee, 1940). The health of the people was seen as the

*There have been several incisive reviews of these earlier documents; see Banerji, 1980a; Bose, 1982; Bose and Desai, 1983; and Ramasubban, 1984.

responsibility of the state. Promoting health as the right of every individual, the National Planning Committee's goal was "an organised public service discharging a common obligation of society towards its members." The Bhore Committee added to this the stipulation that health services should be within easy reach of people, and the unit of health administration "as small as is compatible with practical considerations."

The Bhore Committee, in fact, laid down norms for a rural health infrastructure with short- (10-year) and long-term (20-40 year) goals. In the long-term, a Primary Health Unit (PHU) with 75 beds and a staff of six medical officers, six Public Health Nurses, and six Auxiliary Nurse Midwives was to serve ten to twenty thousand people. One Secondary Health Unit with 650 beds for every 600,000 people (or 15-25 PHUs), and a District Hospital with 2500 beds for 1-3 million people (or 3-5 SHUs) was proposed. The building of this infrastructure was intended to commence from the smallest unit, the PHU, with a 30-bed SHU for every 2 PHUs, and a district health organisation (consisting of 25 PHUs and 2 SHUs) being completed in the short-term.

The construction of Primary Health Centres (PHCs) was begun in the early 1950s in accordance with the Bhore Committee's recommendations, although some of the norms were changed. The pattern adopted envisioned one PHC for every Community Development Block which at that time had a population of 60,000 on an average. By the 1970s, this ratio (one PHC per block) had been achieved but, significantly, the average population of a block had increased by then to 100,000. It currently stands at over 120,000. While there were to be three sub-health centres per block initially, this ratio was later increased to one sub-centre per 10,000 people. The pattern proposed now is one sub-centre per 5,000 people. There is still a long way to go to achieve this ratio, leave alone the Bhore Committee's recommendations for this level.

The National Planning Committee also advised a rapid increase in the number of medical personnel through expansion of training centres and absorption of traditional practitioners into "scientific medicine." It recommended that a ratio of one worker with "elementary training" in practical community health per 1000 people be achieved within five years and that

within 10 years there should be a qualified medical practitioner for every 3,000 people, and a hospital bed for every 1,500.

Generally speaking, neither the National Planning Committee nor the Bhore Committee, nor any of their successor committees saw rural health needs as incompatible with those of specialised, urban-based medicine. While rural health was consistently projected as the most "urgent need," sophisticated medical facilities (including super-quality institutions such as the All-India Institute of Medical Sciences) were also viewed as necessary. By and large, a top-down approach to building health facilities was ordained.

The Bhore Committee also made recommendations in the sphere of health administration, many of which were adopted. It recommended State government autonomy in health, with Ministries at the Central and State levels. Alongside the bureaucratic cadre of health officials, a technocratic cadre—the Directorate of Health Services, under a Director-General—was also suggested. The Committee also advised the establishment of a statutory board of Health Ministers, one of whose functions would be to recommend grants-in-aid to the States. Accordingly, the Central Council of Health was established in 1952.

In addition, a system of Statutory Boards was to percolate down to the district level, where the people were to have elected representation, and where autonomy to design health services (in accordance with general State norms) was to be vested. Councils of "experts" were to be appointed at the State and district levels to advise on technical issues. However, such a system which would have decentralised health decision-making and planning down to the district level has not been implemented.

Similarly, some other recommendations of the Bhore Committee to "democratise" health care have also been ignored. For example, the Committee recommended that village health committees of five to seven volunteers be formed to promote health activities and people's cooperation. This recommendation was not implemented earlier, perhaps due to a lack of 'political will,' yet similar proposals are made in the 1982 National Health Policy Statement.

Certain other features of the Health Policy are based on recommendations of committees which followed the Bhore Committee. The most important of these were the Mudaliar Committee which surveyed progress over the first decade and recommended the strengthening of primary health centres (GOI, 1961); the Kartar Singh Committee which recommended the retraining of unipurpose workers as "Multipurpose Workers" (GOI, 1973); the Shrivastav Committee on Medical Education and Support Manpower which reiterated the need for community health workers (GOI, 1975); and the ICSSR-ICMR (or Ramalingaswami) Committee (ICSSR-ICMR, 1981), which gave shape to the Alma Ata "Health for All" Declaration (WHO-UNICEF, 1978).

Despite attention to "soft" issues (such as the orientation of personnel) right from the inception of health policy-making, the emphasis over the decades has been on the "hardware"—the construction of health facilities, their equipment and staffing, and research and development for technology-based medicine. Much of this is now deemed "inappropriate" and "irrelevant" by the National Health Policy. However, there are no plans to scrap it, and efforts to bring about significant change have yet to start. As Banerji has often pointed out (e.g. Banerji, 1977, 1978), while the "existing model" of health services is frequently decried and "alternatives" sought to improve rural health in particular, there has been a failure to date to modify health plans and allocations (see Chapter 9). Even the ICSSR-ICMR Committee report, which called for "radical change" and devised an "alternative" model of health services, simply built on the existing health system. Certainly, the approach adopted thus far has acquired an historical sanctity, which will be extremely difficult to repudiate in the implementation of the National Health Policy.

Obstacles to Implementation

Against this backdrop, the Policy Statement's proposals are concerned largely with change. The universalisation of health care requires changes in the health sector to extend its services widely, to involve people in them, and to collaborate with other sectors. Change is called for in both bureaucratic and professional

orientations, in their *modus operandi*, and, most importantly, in the relationship between health providers and "the people." Besides the psychological resistance to change which severely impedes development programmes of all kinds, there are also more 'tangible' obstacles to the implementation of National Health Policy.

First, while the universal provision of primary health care is based on the notion that health is the right of every individual, the Indian Constitution does not grant this right to citizens. Rather, it "directs the state" to provide certain amenities to its people, a mandate that is handed down to State governments, who observe it with varying degrees of sincerity. Thus, the second obstacle is the lack of political will, particularly the States' inadequate commitment to act individually on policy that has been framed Centrally. The need for further decentralisation of authority in health decision-making and management, which is so crucial to the implementation of primary health care, raises the spectre of a third set of political obstacles—vested-interest groups, such as professionals, and bureaucratic and political elites.

Fourth, primary health care services are difficult to design, organise and manage, throwing up "organisational" obstacles. Included in this category are certain 'scientific' hurdles, such as inadequate knowledge of the causes of a particular disease or of its treatment, inapplicability of available knowledge or technology, or "multi-causation," which requires simultaneous attacks on many fronts.

Finally, a lack of resources for peripheral health services has been a serious constraint to the implementation of previous proposals for rural health improvement. While this may be brought about in part by the competing demands made by sophisticated (urban) medicine and interests vested in the "disease market," it is also a symptom of the second obstacle, the lack of political commitment to solving India's health problems. Economic pressures, ingrained attitudes, class biases, and inadequate expression of "demand" on the part of the poor (who are most in need of health services and are the target of primary health care, but lack political power) result in health being accorded a low priority by Central and State

Governments. Whether the National Health Policy is implemented will depend largely on how these major obstacles (discussed in greater detail in Chapter 2) are overcome.

Critical Issues

From the foregoing discussion, one can identify a series of issues which are critical to the implementation of the National Health Policy. These are briefly outlined below and taken up for detailed discussion in subsequent chapters.

Planning according to Need. Between the framing of health policy and its transaction lie planning, financing and implementation. In the past, health planning followed a conventional approach to assessing health needs which focused on specific health problems and provided for target numbers of patients or services. The resulting vertical disease programmes suffered from several inadequacies. They focused narrowly on treatment of a disease and did not address the factors underlying susceptibility to it, such as malnutrition, or poor hygiene and sanitation, even though these factors were simultaneously responsible for *several* major diseases. They tended to address only one link in the causative chain of a particular disease, and interventions were designed around 'episodic' campaigns, rather than as concerted and continuous attacks at all levels. This vertical thrust diverted energies from the development of a horizontally-integrated health system geared to those most in need, and able to address underlying causes of ill-health.

However, the Health Policy now calls for an approach to health planning that is focused on the reduction of inequalities in health. Accordingly, to assist in translating the Policy into practice, Chapter 3 examines it from a 'biomedical' point of view, discussing health needs in terms of redressing the three D's—death, disease and disability—and also, importantly, in terms of eliminating differentials in the health of different population subgroups in the country.

Organisation for Universalisation. No consideration of the politics of health or of the biological basis of health policy is complete without an examination of the society involved, and of social norms and behaviour which govern health and health care delivery (cf. Banerji, 1973, 1974; Zurbrigg, 1984). To date,

the health sector has concentrated on the production of manpower and construction of physical facilities with little attention to this social context. Although a sizeable health infrastructure is now available, "under-utilisation" and "limited coverage" are simultaneously serious problems. To overcome these problems and be effective in reducing differentials, health services must be "accessible" and "acceptable" to people. Among organisational requirements for the universalisation of health services, the Health Policy Statement calls for the "reorientation" of health manpower. This will entail imparting knowledge of the socio-cultural and economic dimensions of health to personnel, and enhancing their communication and management skills. Its prime purpose is the creation of a broad interface with "the people." Chapter 4 focuses on the key elements of this interface—women—and discusses the appropriate unit of health-care delivery—the household.

Demand Creation. Discussions of the health sector tend to concentrate on supply-side issues, to the neglect of demand-side considerations. However, the underutilisation of health services points also to the possibility that a lack of "demand" for primary health care could be a major factor constraining its spread. The Health Policy calls for "community participation" as a means of creating demand. However, far from being homogeneous, communities are stratified and divided and may not have the commonality of interest required to act in concert for health improvement. Within them, the people with social standing and economic power generally take or influence decisions as they have greater access to political structures outside the village. Thus, social inequalities affecting health are reinforced. These and other factors are brought to bear on an assessment of the Policy's advocacy of "community participation" in Chapter 5.

"*Privatisation.*" The Health Policy Statement makes frequent reference to the need to involve the private medical world (both individual practitioners and voluntary agencies) closely with the government health effort. On the supply side, the assistance of the non-governmental sector is sought in the setting up of speciality facilities and in the extension of primary health care. However, the Policy does not specify how the government will coordinate with the private sector. For effective collaboration,

the separate responsibilities of private individuals, agencies, and the public system will need to be specified in a way that duplication of effort is avoided, friction minimised, and achievement enhanced. The goal of "health for all" can be a "collective responsibility" only if the actions of each partner are clearly defined and well-coordinated.

Other constraints face the prospect of private voluntary organisations being involved in the creation of demand. For example, in many instances these organisations remain "outside" the village social structures that are so important to health 'behaviour.' They are usually (out of necessity) aligned with village elites, and often themselves face difficulties reaching the most needy. As Chapter 6 discusses, these are among many reasons why private health programmes cannot be considered "models" for the government primary health effort, although some lessons learned by them could be useful.

Simple Technology. The legacy of planned government health services which has emphasised the building of a hierarchical, cure-oriented infrastructure has engendered demand for 'high-technology' medicine. Even among the poor and 'remote' there is a predilection for pills, injections, X-rays and surgical operations and contempt for prophylactic measures, preventive or dietary advice (see, for example, Djurfeldt and Lindberg, 1976).

However, for primary health care, besides the distribution of infrastructure and manpower, simple health technologies must be widely disseminated. As simple technologies are available to address the major health problems, technology is not generally viewed as a limiting factor. However, its potential is largely determined by social and organisational requirements. These contexts are discussed in Chapter 7.

Intersectoral Action. Besides the transformation of social structures, the 'political economy' of health focuses attention on the need to improve living conditions. The country's current health situation is clearly related to inequality, poverty, hunger, unemployment, illiteracy, lack of sanitation, and the low status of women in society. Poverty denies people access to health 'knowledge,' and to food, water, sanitation, and other goods that are the means to maintain health.

Thus, in addition to organising itself for health service delivery, the health sector must be responsible for stimulating those departments whose efforts are related to the prevention of disease and to health improvements. The Health Policy firmly espouses the need for "intersectoral coordination." However, an organisational framework for such coordination needs to be developed, and specific activities related to health goals in extra-health sectors need to be delineated. Priority must be given to the nutrition and water supply sectors which have the most profound effects on health, as illustrated by the case of Kerala, presented in Chapter 8.

Resource Allocation. While "health for all" is a radically egalitarian concept, health resources are grossly maldistributed in the country between rural and urban areas and on a regional basis. The remotest, poorest parts of rural India—with the greatest health needs—are relatively most deprived. Chapter 9 discusses the major gap between what is needed to reduce these and other differentials in health and present allocations of financial resources to and within the health sector. Resource allocations to primary health care will determine the extent to and 'rate' at which the Health Policy's proposed targets are met. As they are primarily a function of 'political will,' the intimate relationship between the political, biological, social, and economic contexts of Health Policy is completed. Thus, the concluding chapter views the Health Policy, once again, in an integral fashion.

CHAPTER 2

TOWARDS IMPLEMENTATION OF THE HEALTH POLICY

As the major thrust of the National Health Policy is on "primary health care," it would be well to examine the content of this mandate, and the political obstacles to its achievement. Primary health care is both a "philosophy" and a "strategy" (Cole-King, 1981). Its philosophical merit is derived from the principles it espouses, while its strategy consists of broad-based activities within and beyond the health sector aimed at the improvement of health.

The philosophy of primary health care holds that health is *a basic human right*. Thus, the main objective of a policy espousing primary health care would be to provide as-yet-unreached groups with at least basic health services through redistribution of financial resources, manpower and materials.

Primary health care also aims to improve *the basis of health*, implying the distribution of resources to maintain health, such as food, water, income and so on. This distributive aspect makes the provision of primary health care a profoundly political issue. The requirement for 'political will' has been explicitly stated (Djukanovic and Mach, 1975; WHO-UNICEF, 1978). Furthermore, primary health care incorporates certain '*democratic*' *principles*, such as "community involvement," individual and collective responsibility for health, and "self-reliance" (Segall, 1983a). These imply that the implementation of Health Policy cannot be left entirely to the machinations of the state to formulate programmes (see Jeffery,

1978). While the level of political commitment will be reflected in resource allocations, in the enactment and enforcement of necessary legislation, and so on, it will mostly be judged by the institution of mechanisms to share 'health power.'

The Strategy of Primary Health Care. The context in which the strategy of primary health care has been adopted (see Chapter 3), and its main objectives point to certain high *priority activities.* These are interventions undertaken by the health sector to reduce morbidity and mortality among the poor, and particularly among women and children. Ninety per cent of all health problems can be dealt with at the primary level where health services should include :

—diagnosis and treatment of common diseases, such as malaria and tuberculosis, and those affecting the special target groups;

—prevention and control of local endemic diseases, including immunisation against the major infectious diseases;

—provision of clean water supply and sanitation facilities, along with hygiene education;

—maternal and child health services, including antenatal care of mothers, trained birth attendance, and family planning (when desired);

—nutritional surveillance, food supplementation for the undernourished, and rehabilitation of the severely malnourished; and

—health and nutrition education.

In order to be "accessible," "acceptable" and "affordable," these services must be distributed through an organisational structure that continuously reaches the mass of the population, has cultural 'fit' at all levels, and is low- or no-cost to the needy. Towards these objectives, people's "self-reliance" and involvement in primary health care delivery are sought in the belief that health is related to people's behaviour more than to any other factor. Community involvement is desired in the assessment of need and in the design and planning of services. People are also to be involved in "mass actions," such as the improvement of water supplies and drainage. However, these tasks cannot be done by the community alone—the assistance of appropriate service agencies is required. In this way, government health

services are expected to interdigitate with the community's role in implementing primary health care.

While a fundamental contradiction may be perceived between state provision of services and the concept of "self-reliance," the issue is resolved by clarifying where one ends and the other begins. The role of the health system is to assist in organising "communities" to change the conditions that perpetuate ill-health. A balance between government health services and community responsibility is the essence of *decentralisation* in health care. A point that bears emphasis is that this balance and other aspects of primary health care will differ according to the specific characteristics—economy, society, history—of a given setting.

Some Denials. An understanding of primary health care can be further strengthened by reviewing what it is *not* intended to be. First, it is not a vertical programme, aimed at eradicating a disease or having a separate organisational structure. Its success will depend on the concerted delivery of its vital components and integration within and beyond the health care system. Second, it is not "primitive" health care, despite its identification with poor countries and with the poor within a country. Although, it is antonymous with "urban," "rich," "sophisticated," "medical" care, it is basic health care for both rich and poor. Its preventive and promotive tasks are applicable equally to all sections of the population. Only because the rich already have the means—better nutrition, water supply and sanitation, and health "knowledge"—to protect themselves from the health problems that commonly affect the poor is the effort directed mainly at the poor. Primary health care must not be perceived as a "welfare programme"—but rather as a means to development of the nation as a whole.

Third, primary health care is not only a para-medical programme to be run by unskilled people. The effective performance of health tasks by village-level workers rests on the assumption that professional assistance will be readily available at referral points. Hence, the medical profession has an important role to play in the organisation and delivery of primary health services and in functionally integrating them with higher-level health services. Furthermore, responsibility

extends beyond the medical profession to professionals in other sectors, so that the basic requirements for health are met.

Fourth, while primary health care may be "low-cost" relative to the price of sophisticated medicine, it is not intended to be "cheap" health care for the poor. While governments may subscribe to primary health care because it is considered a "least cost" solution to widespread ill-health, the provision of universal health services will require sizeable financial allocations. Although primary health care can make efficient use of available resources as various "adaptive" strategies, such as the use of briefly-trained auxiliaries and "appropriate" technologies, are an integral part of it, its implementation will most likely require increased budgets for the health sector.

Political Obstacles to Primary Health Care

India's assignation of the World Health Assembly's "Health for all" Declaration at Alma Ata (WHO-UNICEF, 1978), and its subsequent adoption of primary health care through the framing of the National Health Policy must be considered evidence of intent. However, to convert this aim into deed, serious consideration will first have to be given to surmounting existing political constraints.

Health is Not a Legal Right

Contrary to the philosophy of primary health care, health is not a basic human right under the Indian Constitution. Instead, the subject is dealt with in the *Directive Principles of State Policy*, the 'conscience' of the Constitution (Central Law Agency, 1981). In Article 39, the State is directed to make policy to ensure health, while Article 47 provides that improvement of nutrition and health should be among the "primary duties" of the State. The State is obliged to implement the Directive Principles through legislated policies. The framing of the National Health Policy is a step toward the discharge of this responsibility. The Constitution further provides (in Article 31C) that no legislative measure that conflicts with a Directive Principle can be allowed and that any law enacted by the State towards securing a Principle (or giving effect to

related policy) will be valid as long as it does not conflict with a Fundamental Right.

This positive requirement and provision has received less attention from health policy analysts than the negative condition, in Article 37, that the Directive Principles, unlike the Fundamental Rights, cannot be enforced by legal process. The fact that there is no recourse to judicial process if policies are not legislated or implemented allows the government to delay legislation and implementation. Although there has been a good deal of social legislation enacted in accordance with several Directive Principles, little of it has been aimed at providing health and nutrition to all Indian citizens. To further the implementation of National Health Policy, however, the Directive Principles could provide a guide to action through legislation, provided the various 'actors' on the national scene own up to their individual responsibilities.

Responsibility for Health is Diffuse

The Seventh Schedule of the Constitution identifies separately the subjects on which the Central and State governments are empowered to make laws. Matters pertaining to health are variously listed under "Union," "State" and "Concurrent" categories.* This segregation of responsibility in health matters could engender confusion (or diffusion) in the process of health policy-making, legislation and

*The Union list includes: Centrally-financed scientific and technical institutions declared by Parliament to be institutions of national importance; standards in institutions of higher education or research and scientific and technical institutions; port quarantine and hospitals, and inter-state quarantine; and excise duties on medical preparations. In the State list are: public health and sanitation; hospitals and dispensaries; water supplies and drainage; relief of the disabled, production of intoxicating liquors and excise duties on alcohol. Finally, the Concurrent list deals with economic and social planning (including health planning, development and expansion); education, including technical and medical education and universities (subject to provisions under the Union list); medical professions; prevention of the extension from one State to another of infectious or contagious diseases or pests; mental health; food adulteration; drugs and poisons; welfare of labour, including maternity benefits; population control and family planning; and vital statistics, including registration of births and deaths.

implementation of programmes. A certain degree of cohesion and concensus has been achieved in this respect through the mechanism of the Central Council of Health, established in 1952 under a Constitutional provision and the Central Family Planning Council, established in 1965. These Councils, composed of the health ministers of the State and Central governments, recommend policy directions relating to all aspects of health and propose legislative measures for medical and public health activities. The Central Council of Health is empowered to coordinate and to establish organisations to promote cooperation between Central and State health departments. It recommends the distribution of grants-in-aid to States for health purposes. The annual meetings of the Council since its inception have covered almost every significant topic in the field of health, specifying the pattern of health services to be adopted throughout the country and reviewing progress towards their establishment. Since 1974, the two Councils have been meeting together and discussions have also included the Family Planning Programme.

Existing Legislation. At the national level, some legislation concerned with drug control, vital events registration, and municipal regulation of public health existed prior to Independence (Goel, 1981). After 1947, legislation has been enacted to regulate food and drug quality and the medical professions, and to establish national health institutes and associations. Other significant legislation includes the Maternity Benefit Act (1961) and the Medical Termination of Pregnancy Act (1971).

An early (1953) proposal of the Central Councils, following the recommendations of the Bhore Committee, was to enact a "Model Public Health Act" which would have subjected the organisation and administration of public health to enforcement under an Act of Parliament (Rath, 1978). Unfortunately, the Act was never passed because some State governments objected to the large expenditure which would be required to implement the provisions of the Act, and also, apparently, because the task of consolidating relevant Central and State legislation within such an Act was considered too large to be undertaken by the Law Ministry! Such legislation could have done much to ensure that the States improved their public

health infrastructures, mitigating the regional imbalances which are so striking today and which are a major concern of the National Health Policy. As it is, the government's failure to enact this useful legislation clearly indicates the lack of political commitment to public health in the past—which could yet be rectified.

The inclusion of a number of subjects in the "Concurrent List" provides scope for the Central Government to operate in the field of health services, especially for health planning and research, and in the regulation of standards affecting professional training and food and drugs. Legislative action was taken in the last of these areas by the enactment of the Prevention of Food Adulteration Act (1954) and various subsequent amendments, and in the area of professional training by the passing of the Indian Medical Council Act (1956), which provides for the establishment of a council to regulate standards for medical qualification. The Central Government has also played a pivotal role in the areas of Communicable Diseases and Family Planning by setting up Central organisations to deal with a number of important health problems. Since the early 1950s, national programmes to control malaria (1953), filaria (1955), smallpox (1962), cholera (IV FYP), leprosy (I FYP), tuberculosis (I FYP), trachoma (1963), and population growth (III FYP) have been launched.

Unfortunately, no similar initiatives have been undertaken in the vital areas of Maternal and Child Health, Nutrition, Water Supply and Sanitation, or Rural Health Services. Legislation in these key sectors, crucial for the implementation of National Health Policy, is left entirely to the States. The Central Government can only advise—not enforce. The vast divergence between States has reduced the Central Government's role to establishing 'least common dominators.' Consequently, although uniform national health services have been sought since the Bhore Committee Report (which also advocated a more active role for the Central Government), the patterns adopted by different States, and the extent of their implementation vary widely. Although Maternal and Child Health Services are linked to Family Planning, a Central subject, and Water Supply andS anitation came under a

National Programme up to the Fourth Plan period,* the State Governments draw up priorities, allocate funds, and implement schemes in these areas. For the future, comprehensive national legislation on these important subjects is a must and additional laws in areas such as medical education and service, private medical practice and medical industry are required.

Centre-State Interactions. However, even when the Central Government lays down policy to be followed by the States, it must leave budgeting and implementation to the State Health departments. This has engendered the vastly differing health conditions which are clearly demonstrated by the health indices of different States (Chapter 3). Generally, states with greater health needs have lower per capita health expenditures (Chapter 9). The system of Central financial aid to the States is intended to ameliorate such differences. In the health sector, the Central Government assists the States in a number of ways. Certain health programmes merit 100 per cent aid, while others receive partial grants-in-aid or loans. Some schemes receive free material aid—generally that provided by foreign assistance. For example, over the years, DDT and malathion, vehicles and other equipment have been received from bilateral or multilateral agencies and provided to the States for malaria control. The Central Government meets 100 per cent of the non-recurring expenditures of some national programmes and shares recurring expenditure on a sliding scale. Grants-in-aid are frequently given for training institutions, and a number of 100 per cent Centrally-funded institutions have been established. However, States with low allocations to health also perhaps have lower "commitment" to the ideals of social justice and equity, which may be reinforced by "doles" from the Centre (or, through the Centre, from international agencies). This issue of commitment is linked to other 'political obstacles' which are examined below.

Vested Interests

Among other obstacles to the implementation of National

*It should be noted also that Water Supply and Sanitation were dealt with by the Union Ministry of Health until 1973, but transferred to the Ministry of Works and Housing in that year.

Health Policy are vested-interest groups who are antagonistic or at best apathetic to the universalisation of health care, such as medical professionals and "elites." "Doctors and politics" have been cited as major deterrents to the provision of primary health care (Werner, 1980). The health field is strongly dominated by professionals because a considerable proportion of health-related knowledge is esoteric. Functional specialisation and high technology perpetuate the "mystification" of health (Illich, 1975). Professionals lacking a "social-orientation" wield this 'knowledge power' over those who have greatest need of it—the poor and the illiterate. This is in stark contrast with the objective of primary health care to simplify and disseminate basic health knowledge as widely as possible. To achieve this sharing of power the legitimate authority of those with medical knowledge must be freed of power derived from "mystification." To achieve the "reorientation" of medical personnel towards selfless service goals, which is called for by the Health Policy, there is a need to chalk out clearly where professional know-how is required and where simpler systems of knowledge will suffice.

As described earlier, changes in the "orientations" of physicians have been sought since the First Plan, in keeping with the Bhore Committee's suggestions. The establishment of Preventive and Social Medicine departments in medical colleges was intended to tilt the balance towards socially-oriented training and practice. The issue of doctors serving in rural areas has received attention particularly since the Fourth Plan. However, various mechanisms instituted have had little positive impact, and may even have diverted attention from other manpower policies that could have benefited rural health more, such as the training of paraprofessionals. With the advent of the "populist model" in health manpower policies (Maru, 1976a & b), commitment to changing professional orientations has been diluted further by the belief that the poor can be served by basic health workers alone. Although the primary health worker is the cornerstone of the National Health Policy, the emphasis on upward linkages through a referral system is significant.

Clearly, the implementation of primary health care will require several changes to be brought about in the value-

orientations of health care deliverers. There must be change in focus from individuals to groups within the wider physical and social environments which are the source of disease and of poor health practices. There must also be a change from emphasis on diagnosis and therapy to prevention, especially of communicable diseases. These changed orientations must be expressed by reordering of resource allocations so that personnel and materials are available where they are most needed.

'Elites' who have to date benefited most from the extant highly-sophisticated medical services also stand in the way of universal health care. While specialised medicine is regarded as essential for their health, it is not considered feasible "for all." On the other hand, those who have access to it, will not now accept any 'less-developed' services. They include the rich who have adequate income to purchase a high level of health technology, and people who have an 'insured' access to health care, such as government employees. Thus, policy-makers, planners and bureaucrats themselves may be reluctant to actually implement the National Health Policy! Significantly, the Health Policy has not attempted to eliminate this duality. Rather, it continues to support this double-standard of health care: specialist facilities for the urban elite and basic health care for the rural poor.

The vested interests of professionals and elites are inseparable. Jeffery (1980) has suggested that the "familiar" critique of the health system, which blames existing inequalities in access to health care on the inappropriate training of medical personnel and their reluctance to serve in rural areas, misses the essential point that doctors' willingness and ability to do so is determined by the relationships between medicine and other aspects of Indian politics and society. He has argued that proposals to reform the health delivery system will be vitiated by continued "medical dependency." Post-Independence "dependency theory" relates both to international-Indian and centre-periphery (urban-rural) relationships (see also Ramasubban, 1982). Urban, technological biases have persisted in both sets of relationships—through foreign aid and the "brain drain" in the case of the former, and by the control of institutions and suppression of local autonomy in the case of the latter.

Despite significant differences in the overall health situations of developed and developing economies, health sector policies and practices in the latter countries mimic those in the industrialised world (see Golladay, 1980), for example, by the adoption of medical technology from developed countries (Chatterjee, 1985). Such technologies have limited and most unevenly-distributed benefits, and impose "a severe strain on the health service resources of even the most prosperous nation" (Piachaud, 1979).

The 'brain drain' in medical personnel from the developing to the developed world has the multiple effects of loss of investment in medical education (which becomes purposively oriented towards "foreign recognition" and, hence, emigration), and of continuing 'duality' in the poor countries' health systems (Gish, 1976; Jeffery, 1979). The return of (even a few) highly-skilled professionals, and 'joint ventures' with non-resident doctors add to prevailing inequalities in health care. These doctors form part of the powerful lobby controlling allocations within the health sector. Trained in super-sophisticated medicine, they accord low priority to public health work.

In the context of these and other strong international forces in the health sector, such as foreign-aided health programmes and transnational drug manufacturers, it is legitimate to ask whether significant change can be wrought in the health situation in the absence of changes is dependency relationships (Jeffery, 1982; see also Banerji, 1983a, b). Without doubt, implementation of the National Health Policy will require changes in attitudes and structures entailing strong political commitment. Yet, "few things could be further from the truth (than that) governments are universally committed to improving the health of their populations and that the health planner operates simply as a technical expert within such a context of commitment" (England, 1978). In the past, government has allocated resources disproportionately to sophisticated urban facilities because political support has emanated from the users and managers of such facilities ("elites," urban workers and the medical establishment). Although the subject of rural health has not been used as a popular political platform, it is conceivable that the provision of universal health care and

attention to diseases that affect the majority of the population have the potential to enlist mass political support.

Duality in Health System Organisation

A tendency to believe that significant improvements in health can only be brought about by radical, political and socio-economic changes has meant that Policy proposals focus on functional rather than structural modifications of the health system, such as "reorientation," and "reorganisation," "decentralisation" and "integration." The Policy invokes reorganisation of the existing system as many facilities required for primary health service delivery already exist, including village-level workers. However, the rural health system is known to be poor in content, coverage and effectiveness and thus requires considerable strengthening besides reorganisation. As Banerji (1983b) has noted, the National Health Policy Statement does not even specify how the government proposes to bring about changes in the system. Although a Statement of Policy is admittedly not a plan, when major changes are envisioned, a sound strategy for their implementation would seem to be essential. In the absence of this, it may be impossible to get implementing agencies to deviate from past practices. Furthermore, as the Policy Statement avers, the planning of infrastructure and manpower for health are intimately linked. Thus, the Health Policy remains incomplete without a blueprint for health manpower.

Indeed, the only structural innovation suggested by the Policy Statement, is the introduction of epidemiological field-stations close to the primary level. This suggests happily that an epidemiological approach may be taken to the planning of health care in the future. However, such an approach will require flexibility at the local level in order to be effective, as well as a high degree of training and organisation. Considerable planning and administrative skill and decision-making power will need to be vested in the proposed epidemiological units. In this way, even "decentralisation" entails a major role for the scientific medical establishment and will not simply be equivalent to leaving "the people's health in people's hands."

Such 'duality' is also germane to the issue of technology for primary health care. While the development of such technology involves the research infrastructure, the capacity to adapt and apply it rests with the organisational structures delivering health care, in particular, the village base. The development of such a complex delivery system, needing an effective interface with people as well as appropriate technical, planning, administrative and managerial skills at all levels, has eluded health planners in the past.

Resources are Scarce. In fact, a major impediment to the development of effective rural health care has been low resource allocations. Plan allocations to health have been 2-3 per cent of total outlays. Non-plan funds, which generally account for about two-thirds of annual health expenditures, are similarly only a few per cent of the total budget (see Chapter 9). These figures contrast with the Bhore Committee recommendation that 15 per cent of the government budget go toward health services (GOI, 1946), and the more recent recommendation by the Ramalingaswami Committee of 8 per cent (ICSSR-ICMR, 1981).

As "health is a state subject," the bulk of funds for health programmes are allocated by the States. For example, in the Sixth Plan, Central funds accounted for less than one-third of the total outlay to the health sector (GOI, 1980a). The Centre contributed only one-fourth of the outlay for rural health under the Minimum Needs Programme, and this contribution was earmarked specifically for two Centrally-sponsored schemes, the Community Health Volunteers' (Health Guides') Scheme and the Reorientation of Medical Education (ROME) Scheme. Given frequent shortfalls in disbursements on the part of State Governments—and existing imbalances between States—the issue of Central or State funding for primary health care is an important one. Ultimately, where does the responsibility for financing the implementation of the National Health Policy lie?

Besides government funding, there is the possibility—considered in some detail by the Mudaliar Committee (GOI, 1961) and repeated in the current National Policy—of raising revenues from "the people." Private expenditure on health care is substantial; but to tap this with 'Robin Hood' intentions

requires considerable administrative and managerial skill, as the experience of voluntary organisations has shown (see Chapter 6). Even though they are close to the people, they have had little success in raising finances. Constrained largely by what villagers *can* provide (especially the poorest who are most in need of services) most voluntary health organisations continue to depend to a large extent on funds raised elsewhere. Can government health services hope to do otherwise?

Whether the channel is private or public, the issue of health sector aid is mooted. Currently, about ten per cent of the government's health budget is derived from foreign grants and loans. While health has enjoyed a low priority in aid negotiations in the past, interest among foreign governments in supporting this sector has been increasing. As increased allocations to the health sector are called for, will the Government seek more from international agencies? This is not unlikely if one adds to donor interest in health (and family planning), the competing demands for internal resources which relegate health to a low priority. "Commitment" and "sustainability" then become major issues.

Intra-sectoral allocations of health resources have posed a major problem in the past. Sophisticated urban-based, curative facilities will continue to demand a large share of health spending. What is left over for primary health care may be very little unless the manner in which resources are allocated is drastically revised. For this it is vital to estimate the quantum of finance needed for primary health care, in particular, and for the health system at large. Health may be seen as a productive investment rather than a welfare drain if the benefits of this expenditure compare favourably with the immediate and long-term economic 'costs' of ill-health to the nation.

CHAPTER 3

THE MALDISTRIBUTION OF HEALTH

Health policy is aimed against the 'three d's,' death, disease and disability. Its assessment must therefore start from an examination of the dimensions of the country's ill-health, its distributional characteristics, and its underlying causes. This can help to pin-point the priority areas for action in the sphere of health planning and programmes and the targets that can be set for health improvement.

The Problems

Measurement of Health

The reduction of high *levels* of mortality (death), morbidity (disease) and disability (the residual effects of disease) is the prime purpose of health policy. The WHO has recommended that four mortality indices be used to measure the level of health of a country: the crude death rate, infant mortality rate, life expectation at birth, and proportionate mortality over 50 years of age (WHO, 1978c). While the crude death rate measures mortality across a population as a whole, the infant mortality rate points to 'untimely' deaths. Health, nutrition and sanitation conditions are reflected most vividly in the magnitude of deaths among infants and young children. The availability and utilisation of child health services are particularly germane to this index. The infant mortality rate

can be broken down into neonatal and postneonatal death rates which serve as indicators of the quality of prenatal-intranatal care and nutrition-environmental health, respectively. High infant and young child mortality considerably reduces both life expectation at birth and the proportionate mortality over 50 years of age, so that improvement of these latter indices is related to declines in early mortality. However, these indices also take into account deaths at other ages.

Mortality statistics are usually collected continuously and can therefore also indicate *trends* over time, which are useful to evaluate the effectiveness of health policy. Changes brought about by health programmes, development or other factors can be measured. Furthermore, mortality statistics can be readily related to age, sex, socio-economic status, location, or other characteristics of a population, and *differentials* between groups can be demonstrated. When mortality data are so disaggregated, they can be used to plan and design appropriate health interventions. For example, geographical disaggregation enables the selection of priority areas for health programmes whose measures can then be related to local health conditions.

Often mortality differentials also suggest the factors that may determine mortality. Such determinants are usually social and environmental. Epidemiological studies done in prospect or retrospect can test the association of mortality with various factors, such as those in the environment, suggesting underlying conditions that may need to be removed or rectified in order to improve health.

Knowledge of "causes of death" is important to specify necessary health interventions. "Causes" are biological in nature and, although the data are notoriously deficient, cause of death information can delineate the urgency of a particular problem.

In sum, an understanding of the dimensions and course, differentials, determinants and causes of mortality is necessary to formulate or assess appropriate health policy, and ultimately to estimate administrative requirements in public health programmes.

Mortality rates are used most frequently as indicators of health because they are easier to obtain than other measures

such as morbidity or malnutrition rates. They are more 'accurate' because of the finality of death in contrast with illness whose enumeration can be influenced by subjective criteria. Nevertheless, health policy must address itself to illness as well as death. Policy directed only at human survival without increasing subsequent good health is short-sighted. While strategies targeted at preventing deaths may improve mortality indices, they do not necessarily improve health conditions. Therefore, besides mortality rates, other indicators such as morbidity rates, disability statistics, rates of malnutrition, access to health services, and so on, are pertinent to health policy and planning.

Levels of fertility are also of concern. But it is increasingly accepted that mortality and fertility are intimately linked and that a lasting impact on fertility may require prior attention to mortality. It is not unreasonable to assume that efforts at 'death control' and 'disease control' will encompass an ability to deliver birth control services as well.

Finally, besides the reduction of death, disease and disability, 'development'—in its human or biological sense—forms a fourth dimension of health policy, though one that is far more difficult to measure.

Mortality Trends

As the National Health Policy Statement does, it is customary to cite the dramatic decline that has taken place in the country's death rate during this century in vindication of past health policy (Padmanabha, 1981, 1982). The year 1921 is usually regarded as the 'turning point,' as mortality was extremely high before this—almost 5 per cent of the population dying annually in the 1911-20 decade. Since 1921, the crude death rate has declined progressively, reaching a level of 12.5 deaths per 1000 people in 1981. This level is about one-fourth the average death rate of the 1911-20 decade, and one-third that of 1921-30 decade. The mortality decline is also reflected in the increased life expectancy at birth—from 20.1 years in 1911-20 to 45.6 years in 1961-70, and to over 50 years by 1976-77.

In the period between 1910 and the 1970s, infant mortality declined from about 220 deaths per 1000 live births per year

to 130 per 1000 per year. This was a somewhat slower decline than that of the overall death rate—about 40 per cent compared with 68 per cent over the 60 years, suggesting that factors that have reduced mortality have benefited adults more than children. The decline in the overall death rate still appears to be proceeding faster than the decline in infant mortality. Infant mortality is an important component of life expectancy and hence its reduction is vital to increased expectation of life. In illustration, one can cite Ruzicka's (1984) analysis of the contribution to increased life expectancy of reduced mortality in different age groups between 1941 and 1970. Reductions in infant and child mortality contributed around 40 per cent of the increase in life expectancy (or 6 years), while declines in 5-14 year and 15-44 year mortality contributed about 14 and 27 per cent (or 2 and 4 years) to the increase in life expectancy, respectively. The remainder of the increase (about 20 per cent, or 3 years) was due to reductions in mortality over 45 years of age. Thus, the slower decline of infant and young child mortality compared with overall mortality means that the potential for increasing the country's life expectancy is not being met.

The decline in overall mortality in the country during the middle of this century is generally regarded as rapid relative to commensurate mortality declines in now-developed countries, which took over a hundred years. It is usually attributed to the control of major epidemic "killer" diseases such as plague, cholera, smallpox and malaria, and also, in part, to improvements in living conditions, including the availability of food and curative health services. However, the rate of mortality decline has allegedly slowed down in the recent past (Cassen, 1978; Gwatkin, 1980; Padmanabha, 1982). Ruzicka (1984) has shown that mortality rates fell rapidly in the first 20 years after Independence but that the decline has been slow and erratic in the past 15-17 years in most States and particularly in rural areas.

While the broad parameters of this trend may be accepted, the details are somewhat confusing. If data from the Registrar General's Office are used to examine the trend in life expectancy at birth, the annual gain in the 1951-60 decade appears to be 0.94 years for males, and 0.89 years for females. In

contrast, during the 1961-70 decade, the annual gain in life expectancy was considerably less, 0.45 and 0.41 years for males and females, respectively (UN-WHO, 1982). However, Visaria (1969) and Adlakha and Kirk (1974) have contradicted this analysis. According to their calculations, the trends are reversed, giving annual increments in life expectancy of 0.45 and 0.42 years for males and females, respectively, between 1951-60, and 0.87 and 0.75 years between 1961-70. In corroboration with the latter authors, Ambannavar (1975) had estimated mortality declines of 12 and 21 per cent in the 1951-61 and 1961-71 decades, respectively.

Whatever be the direction, clearly there have been significant changes in the trends of mortality decline in the country in the recent past. These changes in trends suggest that causal factors need to be identified which explain mortality declines and can provide clues for formulating policy to achieve further improvements. If life expectancy increased more rapidly in the 1960s (rather than the 1950s), as Visaria and others have concluded, it is likely that public health programmes and disease control measures had a major impact on mortality.

Although the conflicting claims make it difficult to establish conclusively whether mortality declines accelerated or decelerated between the 1950s and the 1960s, there is little doubt that the 1970s have witnessed a marked slowing down of mortality decline in India. Although life expectancy values for the 1971-80 decades have not yet been computed from 1981 census data, available estimates show a lower annual gain in life expectation during the 1970s—about 0.31 years for both sexes, (Ruzicka, 1984). Even though a slowing in the rate of mortality decline can be expected at lower levels of mortality, this indisputable deceleration in the 1970s is of great concern because of the high level at which mortality persists in the country.

Mortality Levels

India's crude death rate is almost twice that of any developed country and thus, in a global sense, is far from satisfactory. According to a world-wide study (UN-WHO, 1982), India fell among high mortality countries because its life expectancy at birth was below 50 years of age between 1970-72. It

ranked below other developing countries such as the Philippines, Thailand, Burma, Malaysia, Iran and Turkey (as well as those well known for their low mortality such as Sri Lanka, Korea, Singapore and China). By the mid-1970s, India had crossed into the 50-60 year life expectancy bracket and was classified as a "moderately high mortality" country, along with Burma, Indonesia, Papua New Guinea and others (ESCAP, 1982).

The estimated life expectancy at birth in India for 1980-85 is 52.5 year (UN-DIESA, 1984). This level of life expectancy is about twenty years less than that of most developed countries. Although ahead of other nations in the subcontinent—Bangladesh, Nepal and Pakistan—it is still behind the developing countries mentioned earlier.

Besides global points of reference, India's high aggregate mortality rate can be contrasted as well with what has been achieved in certain regions within the country. By 1983, areas such as Kerala, Goa, Nagaland, Manipur, Tripura, Jammu and Kashmir, Haryana and the union territories of Delhi, Chandigarh, Pondicherry and the Andaman and Nicobar Islands had brought down their death rates to below 9 per 1000 (CBHI, 1983) which is the target level proposed by the National Health Policy to be achieved for the country as a whole by the year 2000.

In an absolute sense, a death rate of 12.5 per 1000 means vast numbers of deaths in our population of 758 million (which the country would have exceeded by 1985 according to the Registrar General's projections (1984) or by mid-1984 according to an independent estimate (Sundaram, 1984). About 9.4 million deaths occur annually. Over half of these deaths—around 5 million—are of children in the 0-5 year age group, and one-third—3 million—are deaths of infants alone. This amounts to a death in the country every three seconds. A young child dies every six seconds, and an infant dies every nine seconds in the year! It is these alarming frequencies of death, and the conditions that cause them that need to be addressed by health policy.

Mortality Differentials

The achievements of a few states demonstrate that aggregate mortality rates can disguise marked differentials in mortality in the country. Mortality differentials point to what has been achieved in health in one area or group, but denied another. The persistence of differentials—or even their widening—over time, despite general mortality declines, makes them important 'indicators' of health. They point to inequalities not removed—or even created and perpetuated—by past and present health policies. Their resolution is, therefore, of particular concern in the formulation and implementation of health policy.

The Rural-Urban Dichotomy in death rates is well-known. Between 1970 and 1981, the rural death rate was between two-thirds and three-quarters higher than the urban rate. For example, in 1978, the aggregate death rate of 14.2 per 1000 population consisted of a rural mortality rate of 15.3 and an urban rate of 9.4 (Table 3.1), a difference of 63 per cent—the lowest rural-urban differential in the 70s decade. Rural-urban differentials persist throughout the states and union territories, ranging from over 100 per cent higher in rural Rajasthan and Himachal Pradesh compared with the urban areas of those states, to a difference of only 25 per cent in Kerala (1981).

The rural-urban dichotomy is easily explained by better living conditions (including the availability of health services) in urban areas. However, what is frequently regarded as a geographical differential is, in fact, more a socio-economic one as vast differences exist in mortality levels of different groups in both rural and urban areas.

The Gender Differential. Similarly, in 1978, the country-wide death rate for females (14.5) was significantly higher than that for males (13.8) (Table 3.1). In urban areas, males had a slightly higher death rate than females (9.6 compared with 9.1) while in rural areas, where the bulk of the population is concentrated, the reverse was true—14.9 for males and 15.8 for females.*

Higher female mortality is reflected in lower female life expectancy at birth. An examination of time-series data on life

*At the State level, female mortality is lower than male mortality in the urban areas of seven states (Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab and Tamil Nadu) but Kerala is the only State where rural female mortality is lower than male.

TABLE 3.1

Mortality Rates, All-India, 1978 (SRS) Showing Differences between Rural and Urban Areas, Males and Females, and 5-year Age Groups.

Age-Group	*Rural Persons*	*Urban Persons*	*Combined*		
			Males	*Females*	*Persons*
0-4	53.2	26.3	44.7	52.1	48.3
5-9	4.8	1.5	3.7	4.7	4.2
10-14	2.2	1.0	2.0	2.0	2.0
15-19	2.8	1.6	2.1	3.0	2.5
20-24	3.6	2.5	2.7	4.1	3.4
25-29	4.0	2.6	3.4	4.1	3.7
30-34	4.2	2.7	3.8	3.9	3.9
35-39	5.2	3.9	5.2	4.7	4.9
40-44	7.6	4.9	7.4	6.7	7.1
45-49	9.6	9.4	11.4	7.6	9.5
50-54	15.6	14.7	17.5	13.0	15.4
55-59	24.1	21.1	26.9	19.9	23.6
60-64	38.3	34.2	42.7	32.4	37.5
65-69	53.8	42.3	56.5	47.1	51.7
70+	108.4	106.2	110.2	106.0	108.8
All ages	15.3	9.4	13.8	14.5	14.2

Source: Office of the Registrar General (1983b).

expectancy at birth reveals that females lived longer than males up to the 1911-20 decade but that the situation was reversed beginning with the 1921-30 decade, with males enjoying higher increases in life expectancy than females in every succeeding decade until the end of the 1960s. The gap between male and female life expectancy at birth grew from 0.3 years in 1921-30 to 1.34 years in 1951-60, to 1.7 years in 1961-70, and to 2.96

years in 1970-72. In was higher in some parts of the country.* The trend data thus show that men have benefited more from the mortality declines over this century than women, while the data on female life expectancy at different ages demonstrate that young females are at a particular disadvantage compared with their male counterparts.

The statistic of life expectation at birth is heavily weighted by mortality in infancy and early childhood (i.e. 0-4 mortality) because 15 per cent of the population is in this age group and half of all deaths occur before the age of 5 years. The shorter life expectation at birth of females compared with males is explained to a large degree by much higher female mortality in the 0-4 and 15-29 year age groups (see Table 3.1). The all-India infant mortality rates were 131 and 120, respectively, for females and males in 1978, with a greater disproportion in rural areas (Office of the Registrar General, 1980). The sex differential was generally most pronounced in rural areas of states exhibiting the highest infant mortality. In a study of rural U.P. (which has the highest infant mortality rate in the country), attention was drawn to the higher mortality of male infants until the 1960s (Simmons *et al.*, 1979). However, in the 1970s, even though almost 60 per cent of infant deaths occurred within the first month of life (when males are more vulnerable biologically) the female infant mortality rate was 223 compared with 170 for males. The authors suggested that the status of the female child was declining due to changes in cultural practices in the face of worsening socio-economic conditions—i.e. increasing poverty. Generally, in Northern India, the higher value placed on male children is reflected in their higher overall survival rates during infancy and early childhood.

Female age-specific death rates exceed male death rates up to 35 years of age in urban areas, despite the improvements in status that one might expect to result from urbanisation. In fact, it would appear that the imbalance is greater in urban

*Life expectancy at the ages of 5 and 15 years was similarly lower for females than for males, with gaps of 1.63 and 1.50 years being estimated respectively in 1970-72. However, at 45 years of age, life expectancy values were reversed, with females living 0.6 years more than males (1970-72).

than rural areas in the age groups between 5 and 19 years (Padmanabha, 1982). In urban slums, poor social and economic conditions further aggravate the low status of females as female death rates are found to be extremely high compared with males (Karkal, undated).

Time-series analyses show that the gap in survival between males and females among the young has been increasing. Ruzicka (1984) has calculated that, while the probability of a male infant dying declined by 33 per cent between 1941-50 and 1976-77, for females it declined only by 23 per cent. It currently stands about 10 per cent higher than that for males. Although mortality risk among 1-5 year olds declined somewhat faster for females than males between 1941-50, it is still higher for females.

One outcome of the higher mortality among females has been the country's adverse and declining sex ratio. Until the 1971-80 decade, the population sex ratio had declined at a rate of 6 females per 1000 males per decade during the century. While at the beginning of this century, the four southern States at least had sex ratios favourable to women, the last census showed this only for Kerala (where there has also been a steady decline, a fact little known or appreciated). The all-India sex ratio of 935 females per 1000 males obtained by the 1981 census may suggest a stabilisation of this trend. But it may, alternatively, represent a 'data quirk' or point to deficiencies in the 1971 enumeration. In any case the sex ratio remains at a markedly disproportionate level.

The Age Differential. The crude death rate tends to mask variations in mortality between populations with different age structures. These are reflected better in age-specific mortality rates. Age-specific death rates based on five-year age-groups are available and show marked differences at different ages. In 1978, the 0 to 4 year age group had an overall mortality rate of 48.3 per 1000 (Table 3.1). This dropped to 4.2 in the 5-9 year group and remained below this figure for all age groups up to the 45-49 year age group. A rate comparable to the young child rate is again reached only by the 65-69 year group. Differences between males and females and between rural and urban residents persist through all age groups.

Ruzicka's (1984) disaggregation of recent mortality trends by age groups points to the particularly disadvantageous position of young children. He calculated that the probability of dying between 15 and 30 years of age was reduced by almost 50 per cent between 1941-50 and 1961-70 among both males and females. A somewhat smaller improvement occurred in the 35-55 year age groups. Consistent with generally slow mortality declines in the 1970s, there appears not to have been much improvement in adult mortality during this decade. An examination of mortality among younger groups shows that the 0-4, 5-9 and 10-14 year death rates have changed little in rural areas in recent times, although there would seem to have been a slight but steady decline in these rates in urban areas. The differences between these age groups have not decreased. A comparison of death rates in the 0-4, 5-9 and 10-14 year age groups for two single years in the 1970s (1972 and 1978) (Table 3.2) reveals a greater decrease in female death rates in

TABLE 3.2

Age Specific Death Rates (1972 and 1978) among Children (Male/Female) in Rural/Urban Areas

	0-4 Years		*5-9 Years*		*10-14 Years*	
	1972	*1978*	*1972*	*1978*	*1972*	*1978*
Rural Male	58.5	48.9	5.6	4.2	2.1	2.1
Female	67.2	57.9	6.2	5.5	2.9	2.2
Persons	62.7	53.2	5.9	4.8	2.5	2.2
Urban Male	29.1	25.5	2.5	1.5	1.0	0.9
Female	35.7	27.2	2.7	1.5	1.4	1.1
Persons	32.2	26.3	2.6	1.5	1.2	1.0
Combined Male	53.2	44.7	5.0	3.7	1.9	2.0
Female	61.7	52.1	5.6	4.7	2.6	2.0
Persons	57.3	48.3	5.3	4.2	2.2	2.0

Sources: Office of the Registrar General (1983a & b).

both rural and urban areas, resulting in a reduction of the differential between males and females (particularly in the two older groups). However, there has not been a closing of the rural-urban gap in death rates in any age group, and the difference remains particularly large in the 0-4 year age group.

The age-specific death rate for the 0-4 year age group in 1978 was more than three times the death rate for the population as a whole. This high child mortality rate, coupled with the high proportion of the population in the 0-4 year age group (15 per cent), results in the large percentage of total deaths occurring in this age group. A significantly higher per cent of deaths in rural areas occurs in this age group (48.6) than in urban areas (36.0) and more females (48.8 per cent) than males (45.3 per cent) die by the age of 5 years.

While deaths of children in the 0-5 year age group account for over half of all deaths, infants (0-1 year olds) alone account for one-third. The high risk of dying during infancy does not occur again at any age. This special vulnerability of infants makes their mortality rate one of the most sensitive indicators of health conditions, and trends and differentials in infant mortality are particularly instructive.

The long-term decline in infant mortality has been described earlier. The high risk of dying during infancy declined considerably in the first half of this century, continuing for about 20 years after Independence. In the past 15 or so years, decline has been slow, and was almost negligible in the 1970s.

Actuarial reports based on the decennial censuses show that the aggregate infant mortality rate averaged 146 per 1000 live births in the 1951-61 decade and 129 in the 1961-71 decade. Although the computation for 1971-1981 is not yet available, the rates calculated by the Sample Registration Scheme suggest that a largely static situation obtained throughout the 1970s. The 5-year moving average of SRS rates up to 1979 (e.g. 1970-74, 1972-76 and so on) put infant mortality consistently above 129. This was the rate in the 1961-71 decade. The SRS has reported a somewhat lower rate of 114 in 1980 and 1981 but the consistency of this rate has yet to be confirmed. In any event, this is still a high level of infant mortality, compared both with that in developed countries (between 10 and 20 per 1000) and with Kerala's achievements (37 per 1000 in 1983).

Death rates for male and female infants separately have also remained constant over the decade of the 1970s, those for females being higher (Table 3.3). Rural infantssu ccumb at a rate of about 60 more per 1000 live births than do urban infants—a startling differential. While the difference between male and female infant mortality in urban areas is small, the latter may be as much as 15 per cent higher in rural areas.

TABLE 3.3

Infant Mortality Rates (1972 and 1978)

	Infant Mortality Rates	
	1972	*1978*
Rural Male	141	130
Female	161	142
Persons	150	136
Urban Male	85	69
Female	85	71
Persons	85	70

Sources: Office of the Registrar General (1983a & b).

There is, however, some inconsistency between child mortality rates calculated from the two main sources of data which confounds recent trend estimates (Preston and Bhat, 1984). While early rounds of the National Sample Survey (1965-66 and 1972) seem to agree with the SRS rates around those years, there is a contradiction between the 1979 Survey of Infant and Child Mortality (Office of the Registrar General, 1980) and the SRS rates in the 1971-81 decade. While the former survey suggests a death rate of 39.2 between the age of 0-4 and an infant mortality rate of 112, the SRS recorded mean rates of 49.7 and 126 respectively in the 1971-80 decade. Although a former Registrar General estimated that SRS data are 97 per cent complete (Padmanabha, 1981), Preston and Bhat (1984) suggested that the SRS may overestimate childhood mortality. They favoured the conclusion that under-two

mortality declined by over 30 per cent between 1961 and the mid-1970s. Thus, these authors contend that despite the inconsistency of the evidence, it is likely that child mortality dropped along with adult mortality between the 1961-71 and 1971-81 decades. In any case, whether or not there were comparable declines, the continuing high levels of child mortality suggest that this problem is not easily dealt with and requires a special effort on the part of health policy and programmes.

Infant mortality can be divided further into neonatal and postneonatal mortality, that is, deaths occurring in the first month of life and in the remaining 11 months of the first year. This distinction is important because the major causes of deaths vary in these two periods. In the neonatal period, congenital problems, birth injuries and tetanus are major killers, while in the postneonatal period, infectious diseases and malnutrition combine to cause much mortality. It is believed that deaths in the latter period are easier to control, so that strategies concentrating on postneonatal problems can yield large dividends in the reduction of infant mortality. This would result in a change in the distribution of infant deaths between the two periods so that as infant mortality declines a higher proportion of infant deaths would occur in the neonatal period.

In India, 55-60 per cent of infant deaths are neonatal while in Japan, the United States and Sweden the proportions rise to 66, 75 and 80 per cent respectively. Visaria (1985) has pointed out that in India the per cent of infant deaths occurring in the neonatal period remains relatively constant whether one considers urban and rural areas separately, or different states with their vastly differing infant mortality rates, or changes over time. Thus, she concluded that the control of factors affecting postneonatal mortality also benefits neonatal mortality.

Regional Variations. There are also significant differences in mortality rates in different regions of the country. The overall death rate in 1981 was as different as 6.9 per 1000 population in Kerala and 16.3 per 1000 in U.P. (ORG, 1982c). In each State, rural areas have substantially higher death rates than urban areas. For example, the rural infant mortality rate

was 85 per cent higher than the urban for the country as a whole in 1978, and in the State of Rajasthan, the rural IMR exceeded the urban by 132 per cent. The range of mortality rates among the States is also greater for rural than urban areas. For example, the average crude death rate from 1979 to 1981 was two and a half times higher in rural U.P. than in rural Kerala but only 0.6 times higher in urban U.P. compared with urban Kerala.

Differences in mortality among States are also generally greater for females than males. For example, Dyson (1979) estimated a difference of 17 years in male life expectancy between the State with the lowest and highest mortality rates, and a difference of 23 years in female life expectancy. Such variations between States have persisted during the period of mortality decline in the country as a whole.

Attempts have been made to analyse mortality rates at a "zonal" level and provide socio-cultural explanations. Generally speaking, the central zone, comprising the States of Rajasthan, U.P., M.P. and Bihar, has the highest death rates, while the northern zone (Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab) and southern zone (Kerala, Karnataka, Tamil Nadu) have the lowest. The western (Maharashtra and Gujarat) and eastern zones (Orissa, West Bengal, Assam) have rates in between. However, such analysis is obfuscated by the wide variation in death rates between States in the same zone and by the lack of a meaningful "explanatory hypothesis." In a later section (pp. 60-61), a different grouping of states is proposed according to a simple index which suggests the priority that must be accorded to different states in terms of health policy and action.

The Causes and Determinants

Information on causes of death is useful to determine priority interventions in health care. Unfortunately, cause of death data are grossly deficient. Despite mandatory registration of births and deaths, a very small percentage of registered deaths are medically certified. For example, in 1977, according to Padmanabha (1981), only about seven

per cent of registered deaths were certified as to "cause of death."

Major Diseases

However, cause of death data are also collected through a retrospective lay-reporting system by Primary Health Centres. One in every five PHCs—a total of 982 centres—participates in this scheme, known as the "Continuous Survey of Causes of Death." Paramedical field workers visit households in which deaths have reportedly occurred and enquire about the symptoms leading to death. Causes are tabulated by age and sex for eleven major cause groups: (1) Accidents and Injuries, (2) Childbirth, (3) Fevers, (4) Digestive disorders, (5) Respiratory disorders, (6) Central nervous system disorders, (7) Circulatory disorders, (8) Other clear symptoms, (9) Causes peculiar to infancy, (10) Senility, and (11) Other.

In the five most recent years for which data are available (1976-1980), around 20 per cent of deaths were classified as due to Respiratory diseases, another ten per cent each due to Gastrointestinal disorders, Circulatory problems and "Fevers." "Causes peculiar to infancy" and deaths in Childbirth or pregnancy accounted for almost 15 per cent. "Senility" (i.e. old age) was recorded in less than 20 per cent of deaths, a low percentage because of the large proportion of "premature" deaths. The remaining deaths were distributed among the other cause groups. The major diseases that are involved in the significant groups are: tuberculosis and bronchopneumonias, diarrhoeas, anemia (or general malnutrition), malaria and tetanus.

There are some variations in the distribution of deaths among the cause groups if one looks separately at different age groups, sexes and states. However, it is impossible to discern clear patterns due to small and variable sample sizes in the data sets. The problem of deficient data on causes of death is especially acute when one turns to younger age groups—which have the highest death rates. Deaths in the first month of life are particularly under-reported. However from the Survey of Infant and Child Mortality conducted in 1979, a few causes of death emerge as the most significant (Office of

the Registrar General, 1981). Among infants, neonatal tetanus accounted for the highest percentage of deaths in rural areas (15%). "Prematurity" accounted for a further 8 per cent and was the second most important problem, with preumonia close on its heels. Other important causes of infant deaths were diarrhoeal diseases, influenzas and malaria. In children 1-4 years of age, gastrointestinal infections and bronchopneumonias (possibly the aftermath of measles) were the most important causes of death. Together with "fevers" they accounted for 80 per cent of 1-4 year deaths, (in contrast with 35 per cent of infant deaths). Diarrhoeas are particularly significant during this age because it coincides with the weaning period, although Puffer (1981) has noted that in absolute terms diarrhoeal rates are much higher in infancy than in the second year of life.

The various causes of infant and child deaths point to the factors underlying excess mortality at these ages. 'Prematurity' is the result of inadequate nutrition and prenatal care for mothers which predisposes their infants to low birth weights. Neonatal tetanus arises from the lack of proper aseptic facilities for delivery in the absence of maternal immunisation against tetanus. Poor obstetric care also causes a significant number of birth injuries. Gastrointestinal and respiratory infections in children are manifestations of the malnutrition-infection syndrome which results from poor hygiene and inadequate feeding. These underlying factors point to 'priority areas for action' to reduce child mortality in particular, and overall mortality in the country.

Social and Economic Factors Underlying Mortality Differentials

Mortality data disaggregated by socio-economic levels are not available at the national and state levels despite the "conventional wisdom" relating death rates to levels of living. It is generally believed that "States with the highest estimated levels of mortality are also those where, by and large, other indicators of development and conditions of life also tend to be below the national average" (Ruzicka, 1984, p. 24). However, there have been some attempts to identify the socio-economic determinants of regional variations in

mortality. An early study by Nag (1981) sought to draw a distinction between social and economic factors underlying mortality differentials. Nag compared the states of Kerala and West Bengal in order to identify factors explaining their mortality differences. West Bengal's crude death rate is at least 60 per cent higher than Kerala's and its infant and child mortality rates are roughly double.

In the search for determinants of this differential, Nag found that the "standard of living" did not explain Kerala's more favourable demographic picture. Neither absolute levels of income or food, nor more egalitarian distribution explain Kerala's lower mortality, contrary to an earlier hypothesis (Ratcliffe, 1977). However, Kerala's higher level of "social" development as compared to West Bengal, notably better social services such as education, health and transport, and some favourable environmental conditions were considered by Nag to be instrumental in reducing mortality in Kerala. Greater use of health facilities (particularly maternal and child health services) attributable to Kerala's higher literacy rate, particularly that among women, and greater demand being voiced for health care which has been met in turn by more effective supply, are other factors that may serve to explain Kerala's better performance in reducing mortality.

The importance of "female autonomy"—which clearly underlies women's access to education and health facilities—has been brought out further by Dyson and Moore (1983). They compared north Indian states with those in the south and east and hypothesized that differences in kinship structures—marriage, inheritance and cooperation rules—create lower female autonomy in the north, acting as constraints on women's ability to make decisions that lower mortality and fertility.

However, as Jain (1984) has pointed out, there are considerable differences among the states in Dyson and Moore's regional groupings, and much overlap between the regions' state-level infant mortality rates. For example, Punjab and Haryana have a typically north Indian kinship structure but relatively low mortality rates. On the other hand, Bihar belongs in the high mortality belt, along with Rajasthan, U.P. and M.P., but the authors include it among the low mortality eastern

States. While "female autonomy" is undoubtedly an important factor underlying differentials in infant mortality rates, present rates suggest a somewhat different grouping of states than that arrived at by Dyson and Moore. Indeed, a combination of their 'cultural' factors, the 'social' factors proposed by Nag (1981), and economic variables must be responsible for state-level differences in mortality rates since no factor alone is sufficiently explanatory, as Table 3.4 shows.

TABLE 3.4

Infant Mortality Rates and other Characteristics of Different States (1978)

IMR level and range	*States*	*Range of per capita State Domestic Product (77-78 prices) (Rs.)*	*Range of Female Literacy (Percent)*	*Range of Crude Birth Rate*
HIGH 118-167	Uttar Pradesh Bihar Orissa Rajasthan Madhya Pradesh Assam Gujarat	740-1471	11.3-32.3	30.8-40.4
MEDIUM 97-112	Himachal Pradesh Haryana Andhra Pradesh Punjab Tamil Nadu	1043-2014	20.5-34.1	29.4-33.5
LOW 39-75	Karnataka Jammu & Kashmir Maharashtra Goa, Daman & Diu	994-1886	27.8-64.5 (excluding) J&K)	21.0-31.8

Source: Office of the Registrar General (1983b).

Nation-wide Survey. The nation-wideg Survey of Infant and Child Mortality (Office of the Registrar General, 1981) related

mortality data collected in 18 states to several social and economic parameters (besides age, sex and rural-urban residence) within each State and at the all-India level. The Survey also linked mortality rates with various health care factors and collected information on causes of death. Thus, the data from this Survey may be used to explain state-level differences in mortality rates and assess the relative contribution of different factors.

Jain (1984) has provided an analysis which groups the factors influencing infant mortality into those operating at the individual, household and village levels. Two factors included in the Survey operate at the "individual" level: trained medical attendance at births, and the level of immunisation. The first of these ranged from 6 per cent in U.P. to 62 per cent in Kerala, while immunisation coverage varied from 13 per cent in Assam and Orissa to over 80 per cent in Karnataka, Tamil Nadu and Gujarat. Jain found that trained medical attendance at births had a strong positive influence on infant survival. As one would expect, it was particularly effective in lowering neonatal mortality (deaths in the first month of life) rather than post-neonatal mortality (deaths between 1 month and 1 year of life). On the other hand, although a higher level of immunisation coverage lowered mortality, the influence of this factor was quite weak, in part because only a small percentage of children were immunised at all.

The Survey found that 60 per cent of infant deaths in the country as a whole occurred in the neonatal period, but the percentage varied considerably from state to state. The positive effect that trained attendance at births could have on this large proportion of infant deaths suggests that the relative contributions of neonatal and postneonatal mortality to inter-state differences in infant mortality should be assessed. Jain found that both components were equally important. This suggests in turn that strategies aimed at reducing neonatal and post-neonatal deaths are equally important for the reduction of infant mortality. Decisions to emphasise the reduction of one component over the other would therefore arise from considerations other than the contribution of each component to overall infant mortality.

A second group of factors studied by the Survey act at the "household" level, such as female education, the source of drinking water, and the economic status of the household. Female education has a strong inverse relationship with infant mortality. For India as a whole, illiterate mothers experienced 145 infant deaths per 1000 live births while those with some education had an infant mortality rate of 101, and those with primary education had 71 infant deaths per 1000 live births. In rural areas, infants of illiterate women had a mortality rate more than double that of infants whose mothers had primary school education (132 and 64, respectively). The difference was reduced in urban areas to about two-thirds higher among illiterate women (81) compared with primary-schooled women (49) suggesting that other urban factors can partially overcome the detrimental effects of illiteracy on mortality.* At the State level, female literacy varied from 11 per cent in Rajasthan to 89 per cent in Kerala, and the infant mortality rate decreased with increased female education in all States (except Assam and Andhra Pradesh).

Although Jain did not include mothers' age at marriage in his analysis of the Survey, this parameter is also known to influence infant mortality. The mortality rates of infants born to women who married before 18 years of age were two-thirds higher (in both rural and urban areas) than those of infants born to women who married after the age of 21 years. As women's age at marriage is related to their educational status, their effects on infant survival are interrelated.

Some other household factors also bore relationships to infant mortality levels. Lower mortality was found in households obtaining drinking water from a tap or a hand pump. The affluence of the household (its economic level, judged by use of electricity and per capita expenditure) also affected infant mortality—the higher the economic level, the lower the mortality rate.

*However, the relationship of child mortality to the educational level of the mother is confounded by the observation that children of mothers with higher education (matriculates and above) have a higher mortality (in both rural and urban areas) than mothers with primary education, though this may, once again, be the result of small numbers.

The effects of "general development" at the village level—the presence of a high school, the availability of a medical facility, and overall trained birth attendance were also found to be positive, resulting in lower infant mortality, particularly neonatal mortality. While neonatal mortality was especially influenced by trained birth attendance, postneonatal mortality was lowered by the availability of a medical facility.

All these factors were also considered together in a model by Jain. The level of general development considerably influenced the household variables, economic level and female literacy. The household economic level was also related to female literacy. Trained birth attendance was affected by three factors: general development, the availability of a medical facility, and female literacy. Two sets of factors—the household economic level and trained birth attendance—were significant in reducing neonatal mortality. The household economic level influenced neonatal mortality directly (which may occur through nutrition, for example), while medical facilities exerted their influence on neonatal mortality through both female literacy and birth attendance. (The effect of female education is exerted through trained birth attendance). On the other hand, the availability of medical facilities exerted a direct effect, independent of female literacy and household economic level, on postneonatal mortality, presumably through the treatment of illness.

When the three major factors, trained birth attendance, female education and economic level, were considered together, an interesting picture emerged. The latter two factors explained 54 per cent of the variation among States in infant mortality. Economic level affected mortality directly (and not through medical attention at births), but contrary to what one would expect, had a greater effect on neonatal than on postneonatal mortality.

The availability of village-level facilities such as protected water supplies, medical centres, schools, and transport and communication was found to be associated with lower mortality, particularly among infants, and in rural areas more than urban areas. Among the 41 per cent of villages which had a medical facility within 2 kilometres, the infant mortality rate

was 117 per 1000 live births, compared with 141 in the other villages.

From these findings, one can conclude that trained birth attendance, household economic level, and medical facilities were important determinants of regional variations in infant mortality—the first two particularly of neonatal mortality, and the third of postneonatal mortality. On the other hand, the availability of a school or of protected water supply did not significantly explain state-level differences in mortality. The remaining factors were significant, but interrelated.

A factor that emerges as important for mortality reduction in both Nag's two-state comparison and Jain's analysis of the nation-wide survey is female education. The positive influence of mother's education on infant survival has been shown elsewhere. In a study of Nigerian data, Caldwell (1979) showed that mothers' education was the most important determinant of child mortality even when other factors (such as fathers' education, occupation, mothers' age, etc.) were controlled. Caldwell and McDonald (1981) have suggested that mothers' education may be more important than income and access to health facilities combined. Cochrane (1980) reviewed a number of studies in different parts of the world and showed that infant and young child mortality invariably decreased as mothers' education increased. From Bangladesh we have the information that mortality rates among 1-3 year olds with mothers having no education were five times higher than among those whose mothers had seven or more years of schooling (D'Souza and Bhuiya, 1982). This result has been generalised to other developing countries by the findings of the World Fertility Survey (1983) although the differential may not be as pronounced elsewhere. Four to seven or eight years of schooling for mothers appears to make a critical difference to child mortality.

Mosley's (1983) analysis of mortality trends and differentials in Kenya supports the importance of maternal education to improved child survival, but he considered a family's economic resources also to be an important determinant. He proposed that these factors have had a greater impact on child survival than the formal medical system. Nevertheless, he admitted that certain modern medical technologies (such as anti-malarial treatment) have also helped to reduce mortality.

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There may appear to be a contradiction between Mosley's micro-level study which finds family income important, and Nag's macro-level comparison of Kerala and West Bengal, which concludes that economic levels do not explain mortality differentials in these two States. This is symptomatic of the disagreement that exists on the question of the 'mortality effect of income.' A partial answer to this anomaly is provided by Krishnaji's "death rate paradox" (1984). In rural areas, death rates and infant mortality rates, in particular, are found surprisingly to be *positively* correlated with per capita expenditure (i.e. death rates rise as per capita expenditure increases). In explanation, Krishnaji asserts that per capita expenditure is not an appropriate index for analysing differentials in mortality (or fertility) because it conceals family size variations.

Notwithstanding Nag's dismissal of economic factors as explanations for the differences between Kerala and West Bengal, there is evidence for a strong relationship between infant mortality and income distribution. For example, Rodgers (1979) found that life expectancy was between 5 and 10 years lower in relatively "inegalitarian" countries than in more egalitarian ones. Flegg (1982) also found income distribution to be an important determinant of infant mortality. Income is important for the reduction of child mortality because of its effects on nutrition, housing, sanitation, clothing, and access to health care. It has been suggested that women's incomes may have a greater impact on child health than household income in general as a greater proportion of a mother's income may be spent on child nutrition and care, than of family income. However, mothers who are earning may have greater "autonomy," and so the effect on child survival may take place through better child care practices, including the use of health services. Particularly when it comes to child nutrition, mother's knowledge may be more important than income *per se*, as suggested by Bairagi (1980) for Bangladesh.

Bairagi (1980) studied the relationship of child nutritional status to several variables such as family income, maternal education and birth order. He found that income was not the only constraint on the nutritional status of children, even in the lowest income group. Maternal education had a significant

influence on nutritional status, as did the child's sex and birth order. A literate mother utilised scarce resources better for her child's welfare than did an illiterate mother with higher income. A general conclusion arising from these findings may be that a minimum level of income is necessary to ensure child nutrition and health but that income alone is not sufficient to guarantee child survival.

While age differentials may be thought of as largely biologically determined (although culture also attaches different values to the survival of differently-aged persons), social factors primarily explain mortality differences between the sexes. Studies in Bangladesh have elucidated some of the 'mechanisms' involved. In Bangladesh, female mortality is lower than male mortality in the neonatal period, but higher from the post-neonatal period onward through childhood, adolescence and the reproductive years, as in India. The greatest differences occur in the 1-4 year age group, when female mortality is found to be 50 per cent higher than male mortality (D'Souza and Chen, 1980). This pattern emerges as a result of "sex-biased health and nutrition-related behaviour." In a study of intrafamilial food distribution (Chen *et al.*, 1981), it was found that the nutrient intake of boys in the 0-4 year age group was higher than that of girls (even when adjusted for body weight), and male children under 5 were brought to health centres more frequently than female children (although females had higher morbidity rates). These practices reflect the cultural preference for sons, which similarly exists in most communities in India, and persists in the form of social discrimination against women at all ages.

In summary, a variety of socio-economic factors have important influences on mortality, and there is no simple framework for their selection and analysis. While education and literacy, occupation and income are all highly correlated with the standard of living, they are also related to the awareness and use of health services, better nutritional and hygiene practices and so on. The behaviour of individuals, families and communities regarding 'consumption' and 'investment' decisions affecting health is influenced by development in its widest sense, and by technology and delivery in the health field. Both health services and 'development' are of paramount importance to survival,

This points to the need for health policy to adopt mortality reduction strategies that provide a proper 'mix' between development and health care. It is not a case of "either-or" between health services and socio-economic improvements: a concerted attack on both the immediate and underlying causes of mortality is required. Health services can approach the former, as well as a part of the latter. However, before turning to their role, a review of the arguments relating mortality reduction to development would be useful.

Policy Options

Development as a Means of Reducing Mortality

The differentials in mortality and their underlying causes suggest that mortality rates are potentially responsive to changes in economic and environmental conditions brought about by development policies. The relationship between mortality—or health—and development has been analysed in various ways, and has engendered much debate. The debate has centred on the relative importance of public health programmes and improved access to medical care on the one hand, and of economic improvements which affect nutrition, education, housing, water supply and sanitation, on the other. Some authors consider modern medicine the chief cause of the mortality declines in different parts of the world during this century, while others claim that health programmes have had only limited impact and that economic development and social change are more important reasons for the decline.

Between the first and fifth decades of this century the infant mortality rate in the U.K. was reduced from levels over 200 to 25 per 1000, or 10 per cent of the starting level, within 40 years. McKeown (1976) has argued that the decline in mortality in Britain after the eighteenth century owed more to an improved standard of living, including nutrition, hygiene, sanitation and housing, than to health services, either preventive or curative. He also extolled the role of behavioural change—particularly that resulting in smaller family size. In particular, deaths due to respiratory diseases such as tuberculosis, whooping cough, and pneumonias which were major killers in Britain at that time (and are still significant in

countries such as India), fell rapidly in the nineteenth and early twentieth centuries—before specific medical measures against them were available. Sanitation led to a rapid decline in deaths due to diarrhoeal diseases in the early twentieth century, again before other means of "prevention" or treatment became available. The advent of immunisation and modern medical treatments therefore contributed less to reduced mortality from such infectious diseases, than did the better health status engendered by improved nutrition and lower exposure to infection brought about by public health measures. A similar thesis was put forward by McDermott (1978) to explain the decline in the death rate of New York City between 1896 and 1931.

On the other hand, looking at infant mortality declines experienced by developing countries, Stolnitz (1965) considered socio-economic factors of lesser importance than public health measures and health facilities. This was based in part on the observation that such declines had occurred in countries at different levels of development and with different rates of economic growth. Amplifying this further, Preston (1975, 1976) found that while mortality was a function of per capita income levels, other factors such as public health measures controlling diseases such as malaria, smallpox and tuberculosis were also responsible for the declines in mortality in the developing world, and *increasingly* so over the period from 1900 to 1960. However, declines in certain other diseases such as respiratory infections which also brought about some mortality reduction were not due as much to specific health measures as to improvements in environmental conditions (including nutrition, water supply, housing and sanitation), associated with economic development.

Another approach to understanding mortality and development interrelationships is the study of *differentials* between or within countries. In a cross-sectional study of 120 developed and developing countries in 1970, Preston (1980) found that literacy was a significant factor in lowering mortality and suggested that it may be an intermediate variable responsible for the relationship between life expectancy and per capita GDP. Others (e.g. Grosse, 1980) have studied the effects of factors such as nutrition and sanitation on mortality, and found

that nutritional status (as indexed by per capita calorie consumption), health services, water and sanitation were also important.

The Role of Health Services

There are a few studies that compare mortality between areas which differ *solely* in the availability of health services. Zachariah and Patel (1983) compared infant mortality in three districts of Kerala. They found that infant survival was mostly influenced by mother's education, that household expenditure was significant, but that water and sanitation were not (except to 1-4 year survival). Social factors, such as caste, and demographic ones, such as birth order, were also important. However, a large part of the effect on mortality went unexplained and since the authors did not look specifically at factors such as health expenditure or services, these may have accounted for some of the unexplained effects. Similarly, Krishnan (1975) found literacy an important variable for explaining interstate differences in mortality rates in 11 states of the country. He examined their overall death rates in terms of literacy, doctor-, hopital-, and bed-population ratios, per capita incomes, urbanisation, and state per capita expenditures on medical and health services. Again, while he found literacy to be the most significant factor, the health service ratios also had some explanatory power. On the other hand, *health expenditure* was not a particularly significant explanatory factor.

Further, Krishnan (1976) and Nair (1980) showed that the infant mortality rates of different regions in Kerala were positively correlated with the size of the "catchment areas" of health centres. Studying infant mortality rates between 1971 and 1977, Nair (1980) pointed out that infant mortality was lowest in the "lowlands" (ranging from 30.7 to 57. 3 per 1000 live births) and in the "midlands" (range: 44.8—61.2), and high in the "highlands" (68.5—101.7). (The overall rates for Kerala ranged from 48.9 to 66.0). Nair attributed these variations largely to differences in access to health facilities in the different regions, the "highlands" being areas of difficult terrain and, thus, low access, which resulted in high infant mortality.

Despite considerable ambiguity in these conclusions, both the 'trend' and 'differential' approaches to studying the relationship of mortality and development have led to the proposition that economic development is the means to reduce mortality and improve health, with the implicit—and often explicit—contention that resources spent on health measures are wasted resources and that they should, instead, be channelled into "development," from which health will automatically ensue. However, the experience of many countries which have seen rapid growth in GNP shows that this is not necessarily the case, and that direct social development, rather than expectations that benefits will "trickle down" to the poor, must come to be considered more important for the improvement of health.

This stand has been supported particularly by proponents of a third approach to studying mortality and development interrelationships. This is the examination of micro-level health projects that in a short space of time brought about significant mortality, morbidity and fertility declines in their target populations. This approach was used by Gwatkin, Wilcox and Wray (1980) in their study of ten field projects in different parts of the world which had specific health and nutrition objectives. In most of the projects the 'experimental' areas experienced more rapid mortality declines than the 'control' areas. Although direct cause and effect may be questioned, the important role of various project components, such as village-level health workers, was established. The authors concluded that health interventions did "make a difference." However, going on to contrast project experience with national health and nutrition programmes, the authors pointed to the vast unrealised potential of the latter. While the ten projects reviewed were able to reduce infant and child mortality, wider-scale health programmes have generally lacked this impact.

Choices

How do the findings of these three types of studies have a bearing on the choice between health services and development for the reduction of mortality and its differentials? While the prevalent view of the 1960s and 1970s was that mortality reductions could be achieved by implementing public health measures, there appears to have been a *volte face* on this issue

in connection with the primary health care movement. For example, a recent UN document states that "primary health care services can be expected to contain some of the endemic causes of child death, but it is doubtful that public health measures in themselves can sustain the momentum of mortality decline ... in the absence of broad social and economic progress" (UN, 1983).

By far the most pervasive influence on the proponents of this argument in both developing and developed countries has been that of Illich whose work may be seen in a continuum with that of McKeown (1976). The ecological view held by McKeown proposes that man's physical and socio-economic environment is largely responsible for his health and that changes in this environment through reforms in employment, housing, sanitation and so on have a far greater impact than the provision of medical care. Add to this the view that man's 'health behaviour' is also a product of society, culture and economics, and contributes to disease, and you get the Illichian maxim that individuals must assume responsibility for their own health (Illich, 1975). This maxim is at the heart of the primary health care approach and, consequently, of current health policy in India.

While McKeown asserted that the effectiveness of medical care is quite limited in this scheme of things, Illich went further in his critique of modern medicine and proposed that not only is its positive contribution negligible, but that it has had considerable negative impact on health. A perusal of contemporary Indian health documents reveals that Illich's arguments have been freely applied to our context. For example, the Ramalingaswami Committee report (ICSSR-ICMR, 1981) pays much attention to his view, perhaps without adequate cognisance that the context in which Illich spoke was primarily that of industrialized societies where life had become 'medicalised' and much disease was iatrogenic. (Significantly, Illich simultaneously also advocated curbs on industrial growth in these countries). While his analysis and his conclusion that individuals must be responsible for their own health may be relevant to the affluent section of our 'dual' health economy, its application to the poor in a country like India may be facile and misplaced if

this application suppresses the delivery of health care in favour of "anticipated development."

Such a choice could not be made if it were recognised that the argument that health services contribute little to health improvement is based largely on retrospective analysis of the experience of developed countries, as discussed in the previous section. Both 'project experience' and intra-country investigations in today's developing world suggest that the role of health care (both preventive and curative) is extremely important as discussed above. Another case in point is that, although the experiences of China and Cuba are used to suggest that socio-economic improvements are important for the betterment of health status, in both cases access to health services was used as a strategy to alleviate poverty, and the improvement of nutrition also constituted a major thrust of development policies in those countries.

Historical analyses also have limited applicability because of advances in health knowledge and technology. While there was little recourse in health care for many of the health problems that existed while the West was industrialising, the situation is quite different in India today. India's health infrastructure is far more highly developed than that of eighteenth and nineteenth century Europe or America. Medical science and the technology of health care are at vastly different stages of development than they were during that historic period. Health interventions based on technology and/or "organisation" (of health services) are available which can be applied even at low levels of socio-economic development. If made accessible to the poor, these would improve their health status and even their "standard of living." For example, immunisation was not available until the 1940s and so it did not play a major role in bringing about changes in the health status of developed countries, in contrast to the role of improved standards of living. Other examples are advances in antenatal and obstetric care and oral rehydration therapy which can tackle major extant health problems. Ignoring the potential of these effective medical technologies and advocating only socio-economic improvements which could take a long time to come about, would constitute a policy of "triage." While economic development and social change are undoubtedly essential for overall

health improvement, one should not downplay the role of the health sector both in providing necessary and useful health-"producing" services, as well as in *inducing social change* by improving health-related practices. There is no exclusive choice between health and development. *Both* are necessary.

Parameters for Policy and Planning

Target Groups

From the foregoing analysis of mortality in the country it is clear that a major objective of health policy should be to *reduce differences* in health conditions which result in the differentials in mortality between age groups, the sexes, in different states, and locations. The disaggregation of mortality data by these criteria permits identification of priority target groups and areas requiring special attention in health programmes. A prime target of health activities must be the 0-5 year age group, and within this, infants. As children under five constitute about 15 per cent of the population and their deaths account for nearly half of all deaths, a crucial element in the implementation of health policy is the reduction of infant and child mortality. Any improvement in child mortality would considerably reduce the general death rate. Furthermore, females in this age group as well as those in the reproductive years require special attention.

Priority Areas

Health improvements are particularly necessary in rural areas throughout the country and more urgently in those of the States of the "Hindi belt." Using an index constructed from the crude death rate, the rural infant mortality rate, and the size of the rural population, one can separate the country's 17 major States into different priority groups as follows:

First priority:	Uttar Pradesh	*Second priority*:	West Bengal
	Bihar		Andhra Pradesh
	Madhya Pradesh		Tamil Nadu
	Rajasthan		Gujarat
			Orissa

Third priority :	Assam	*Fourth priority* :	Himachal Pradesh
	Maharashtra		Kerala
	Karnatak		Jammu and Kashmir
	Punjab		
	Haryana		

If the sex ratio is also considered in such an index, the State of West Bengal would enter the first priority category, the States in the second and third categories would be roughly equivalent in priority except for Karnatak which would stand on par with the three states in the fourth priority group.

While the National Health Policy has set aggregate national targets for mortality reduction, it has ignored regional differences. Instead, it should set a minimum target for each State, especially for those that currently have the highest death rates. Although this is done at the State level, given the wide variation among States—and the fact that the worst-off states account for large proportions of the country's population, a phased and differential system of target-setting for mortality reduction is essential for the improvement of the aggregate national rates.

Numbers Involved

The National Health Policy Statement set targets for the crude death rate and other mortality indicators. The death rate is to be brought down to a level of 10.4 by 1990 and 9.0 by the year 2000 (i.e. by 17 and 28 per cent of the 1981 level by these years, respectively). Using population projection data, one can estimate the total number of deaths that will take place annually at the 'target' rates. If the Registrar General's medium population projections (Office of the Registrar General, 1984) are the base, 8.7 million deaths would occur in the country in 1991 and over 8.9 million in 2001. On the other hand, if "alternative" (more realistic?) population projections are used (Sundaram, 1984), the number of deaths even at the targeted lower mortality rates would be almost 9.0 and 9.5 million in 1991 and 2001, respectively. Thus, although the overall mortality rates are to be reduced, the larger population denominators result in the number of deaths per annum remaining almost the same over the 1981-2001 period. Therefore,

the National Health Policy targets seem to aim only at a 'stabilisation' of mortality in terms of total deaths or 'deaths per second' in the country. Health programmes would be 'running to stay in place.' Instead, an objective of health policy should be the reduction of absolute numbers of deaths in the country.

Even at these standstill levels, these figures point to the enormity of the challenge to health policy and programmes as well as to development efforts. A 17 per cent reduction in the mortality rate by 1990 means that 1.5-1.8 million deaths will need to be averted every year up till then from current levels, and a 28 per cent reduction by 2001 means almost 3.5 million fewer deaths should occur then than at the current rate.

Significantly, the death rate targets set by the health policy recognise that a reduction in the proportion of total deaths occurring during infancy (and childhood) is necessary for the reduction of overall mortality. From the current proportion of one-third, infant deaths are to constitute only 23 and 14 per cent of total deaths in 1991 and 2001, respectively. More than half the gains in mortality appear to be sought from a reduction of infant deaths alone. For example, were there to be no reduction in the infant mortality rate by 1991, the country's overall death rate would decline from the current 12.5 to only 11.6 instead of the proposed 10.4.

Strategies

For the implementation of health policy, one must approach the designing of health programmes from the point of view of the differentials in health status among different age and sex groups, paying heed to the causes, both proximate and underlying, of these mortality differentials. Hence, to reduce excess mortality of the disadvantaged groups broadbased action is called for, including maternal and child health programmes, nutrition improvement, and the provision of sanitation and safe water supply. Health education may aid the implementation of health programmes by increasing awareness of factors causing illness, of preventive health measures, and of health services but is inadequate in itself unless other constraints to better health are also removed.

Reducing Child Mortality. The majority of deaths occur in the 0-5 year age group. While it is by no means implied that health services alone can reduce this vast differential, there is evidence to believe that simple health interventions can prevent 50 to 60 per cent of infant and child deaths, even without "economic development" in the developing world (Rohde, 1982). The number of conditions causing the majority of child deaths is small—diarrhoeas, pneumonias and infectious diseases (pertussis, tetanus and measles) with associated malnutrition. These "killers" are amenable to technologies which are available and within the capability of many developing countries. There are antibiotics to curb respiratory infections, toxoid against tetanus, and immunisation for measles and pertussis as well as tuberculosis, which could cut down the number of cases and eliminate all deaths from these diseases.

Beginning with the infant, one can identify low birth weight, neonatal tetanus, and birth difficulties as major causes of mortality in the first month of life. These neonatal deaths, which account for over half of infant deaths, are related to the lack of maternal care during pregnancy and childbirth. Thus, increasing mother's access to food during pregnancy and to knowledge of their nutritional needs, to immunisation and prenatal check-ups, and to trained birth attendance, can have significant influences on infant mortality.

Some findings of the Survey of Infant and Child Mortality (Office of the Registrar General, 1981) point to the gaps that need to be bridged. The Survey found that 25 per cent of births were of "low birth weight." Thus, a high proportion of mothers received inadequate nutrition, were in poor general health during pregnancy, or had no access to prenatal care. Three-quarters of births in rural areas and one-third of those in urban areas were not attended by a trained midwife or medical practitioner, demonstrating the absence of adequate intra-natal services.

In the postneonatal period, infections and parasitic diseases are important causes of morbidity. Malnutrition acts synergistically with these infections to cause high mortality in this age group and through the remaining preschool years. However, deaths from these diseases can be prevented for the conditions

can be rectified with simple measures: immunisation against childhood infections such as measles and pertussis, anti-parasitic treatment, antibiotics against respiratory ailments, and oral rehydration therapy for diarrhoeal diseases. Greater access of children to proper nutrition can be ensured by increasing mother's awareness but the means to improve nutrition must also be provided. According to the 1979 Survey, only 42 per cent of children who died in infancy in rural areas and 65 per cent of those in urban areas were treated by a trained medical practitioner. In the 1-4 year age group the percentages were 57 and 77 respectively. Thus, there is considerable need to increase the access of rural women and children to appropriate medical care.

Reducing Female Mortality. Attention to children and to women is generally subsumed under "maternal and child health services." However, these do not pay particular attention to the female child who is at a cultural disadvantage, nor do they attend to 'non-maternal' aspects of women's health. Even their potential to lower mortality due to "maternal" causes among women is not being met. The ambit of MCH programmes must be extended to include all women, regardless of their reproductive status and to address the general health problems which underlie the high mortality rates among females of all ages. Chapter 4 is devoted to a consideration of this subject.

Reducing General Mortality. Clearly, nutrition improvement, better sanitation, and the provision and protection of water supply are crucial measures which would benefit young children as well as other population groups. In addition, the wider control of infectious diseases through environmental measures, and early diagnosis and treatment, is essential to reduce deaths due to the major diseases. Diseases such as tuberculosis and malaria, which account for a considerable proportion of morbidity and mortality, are directly amenable to preventive health activities and to health service interventions. Malnutrition can also be reduced by effective control or early treatment of these diseases, besides requiring attention to food availability and consumption.

Linking Health and Population Policy

There is considerable evidence for a two-way relationship between mortality—particularly infant and child mortality—and fertility, which has special significance for health policy. High mortality among infants and young children is both the result and a cause of frequent births. Population groups or areas, such as the states of U.P., Bihar, Rajasthan and Gujarat, with high mortality rates also have high fertility rates.

Mortality differentials between males and females particularly in the first year of life may result in part from high unwanted fertility. A child of high birth order has a higher risk of death than his or her older siblings, The Survey of Infant and Child Mortality found that 20-25 per cent of live births had a birth order of five or more. The high infant mortality rate (especially in rural areas) reflected the high risk of this large proportion of infants. (Infants of multiple births also have a higher risk of death). Infant mortality is also high among children of very young mothers and those over 39 years of age. Finally, short birth intervals also greatly increase the risk of infant death. For example, Das (1975) found that the infant mortality rate among children born between 1.5 and 2.4 years of a previous birth was almost half that of children born within a 1.5 year interval. With longer birth intervals, the infant mortality rate decreased further. His analysis also pointed to another factor important to the survival of infants—the mother's previous child loss experience. Mortality was considerably higher among infants of mothers who had lost a previous child.

There is also evidence that children born in nuclear families among the poor have lower chances of survival than those of joint families (Simmons *et al.*, 1982). However, this is perhaps of greater social than demographic significance, as it suggests that support to the mother by family and community is an important determinant of child survival.

These relationships suggest that contraception—particularly, birth spacing—is a measure that could reduce child deaths. It has been estimated (Princeton, 1983) that maintaining a two-year spacing between births could reduce infant mortality by 10 per cent, and child mortality by 16 per cent. In can also reduce maternal deaths because repeated pregnancies at short intervals result in the nutritional depletion which renders women particularly susceptible to disease and death.

However, as is now well-known, people—rich or poor—are reluctant to limit their fertility unless they are assured of the survival of their children. Therefore, although family planning services have in the past almost submerged Maternal and Child Health Care, there is clearly a need to rectify this situation so that child mortality reduction assumes the first priority. Thus, population policy must take off from health policy. The links between health and population go beyond the exigencies of service delivery to common underlying social and economic phenomena.

CHAPTER 4

ORGANISATION FOR HEALTH: FOCUS ON WOMEN AND HOUSEHOLDS

The examination of India's health situation undertaken in the previous chapter points unequivocally to two large population groups who are especially 'vulnerable' to disease and death—"females" and children. The health of these two groups is inextricably linked—both biologically and sociologically. From the moment of conception to the time of weaning the child is physically dependent on his or her mother; and many aspects of a woman's health, her nutrition and infection status, directly affect the health of the child. Besides biological effects, women also determine their children's health through practices relating to feeding, health care, children's work, and so on. In turn, the survival and health of children and their number have profound effects on the physical and psychological health of women. Accordingly, if progress is to be made toward improving the health of these two groups, attention must be paid specifically to women's health status, and to their health-related behaviour, including the social and economic conditions that underlie these. This chapter thus sets out to examine the health status of women and its sociological underpinnings. It aims to draw the parameters within which health policy, planning, programmes and service providers must operate in order to address women's particular health needs, to assess the extent

to which these parameters are currently being heeded and to point to future directions in this regard.

Women's Health Status

Differences in health status between the sexes emerge clearly in several mortality indicators which have been discussed in the previous chapter. In addition, a direct measure of the health status of women between 15 and 44 years of age is the maternal mortality rate. At around 500 per 100,000 live births (Ministry of Health and Family Welfare, 1981) the all-India rate is about 50 times that of a developed country and of the well-to-do within India. However, since poor rural Indian women have an average of five or six live births compared with one or two among their better-off counterparts, their actual risk of dying of a maternity-related cause is 150 to 300 times greater. (The reason for comparing the poor rural Indian woman with the well-to-do within India or in the West is, of course, that there is no comparable statistic for men!). Besides anemia or general malnutrition, the commonest causes of maternal deaths are toxemia and septicemia—reflections of the inadequate health care available to women in the ante-natal, intra-natal and post-natal periods.

In general, during the course of this century, while life expectancy has increased for both males and females, in relative terms women have fallen behind in their ability to survive. The adverse and declining population sex ratio that has resulted from the higher mortality of females is widely used as evidence of the disadvantageous position of women in Indian society. The current level of 935 females per 1000 males in the country is a yawning gap (Office of the Registrar General, 1982a b). Although it is presumed that this decline has abated with the slight upturn seen in 1981 census data, it is too early to say whether this is so. The 1981 level may simply be a data 'quirk,' or the 1971 level may have been an underestimate as a 'smoothening' of the curve would suggest. There has also been a steady decline in sex ratios at the State level. While at the beginning of this century the four southern states had sex ratios favourable to women, the last census showed this only for the

State of Kerala, where also there is evidence of women's deteriorating status (see Chapter 8).

In addition to these demographic indicators, health indices such as morbidity rates, nutritional status measurements and food consumption data, indicate women's inferior status. Indeed, the proximate causes of higher female mortality are higher rates of disease and malnutrition which, while inadequately documented by macro-level data, are usually clearly brought out by small-scale surveys and studies (Jesudason and Chatterjee, 1979; CBHI 1976b, 1977, 1978b; Khan *et al.*, 1983b, Kynch & Sen, 1983; Kamath *et al.*, 1969).

Micro-level nutrition surveys generally find higher rates of malnutrition among women and girls compared with men and boys. Within the household, food is distributed more in accordance with the status and position of an individual than with nutritional requirements. While women get a smaller share of the family food, they may expend a greater proportion of its energy, as demonstrated by a study of energy expenditure in rural households (Batliwala, 1982). The food intake of pregnant women, far from being increased in accordance with the needs of pregnancy, may be further restricted because of cultural taboos.

Some biological reasons for the poor health of women such as "repeated pregnancies" are well known. There are also other problems unique to women which, although believed to be widely prevalent, conspicuously lack the support of quantitative data. For example, amenorrhoea and infertility are problems of grave significance to the individual woman who is subject to Indian societal norms (which place a premium on fertility) but their prevalence is difficult to ascertain. In another category—but also inadequately quantified—are crimes against women which rebound on their health, for instance, rape, burning, and physical assault. There are also female-specific "iatrogenic" problems, such as those related to the use of contraception (IUDs, pills) or resulting from sterilisation or abortion. Although it may not be possible to assess the importance of these on a scale of health issues, they nevertheless are part of the subject of women's health. That they add up to a considerable disadvantage to women is demonstrated by the simple statistic that while 8.4 per cent of male deaths occur

between the ages of 15 and 34 years, 11.7 per cent of female deaths are in this age group (CBHI, 1976b).

Women's Utilisation of Health Services

From the foregoing discussion it is clear that data on female morbidity are fragmented. One reason is that few women venture to health centres, clinics and hospitals which are the repositories of such information! Available data on the extent of utilisation of health services definitely indicate differences between males and females. Despite higher morbidity among females, more treatment is sought for males, higher percentages of ailing men than women get treatment, and a higher proportion of services are provided to men (Coyaji, 1980). A study of Primary Health Centres in Rajasthan, revealed five men seeking medical treatment for every woman (Murthy, 1982). Khan *et al.* (1982) reported that in the U.P. villages they studied, only in 9 per cent of female illnesses was treatment sought from the nearby PHC or government health facility. The vast majority of women simply used traditional remedies.

In a survey in Madhya Pradesh, it was found that over half of all current, serious illnesses reported affected females (Jesudason and Chatterjee, 1979). While treatment had been sought for about half of all illnesses, only 15 per cent of patients had approached government facilities, the remainder seeking private allopathic or traditional care. Only one-third of the women respondents knew the location of the nearest sub-centre (staffed by an ANM) and about 40 per cent the location of the nearest Primary Health Centre. Knowledge of the working timings of these facilities was even poorer. Only a quarter of the women had actually ever visited the local sub-centre, and less than 20 per cent the PHC. Nor did women attend sub-centres or PHCs for ante-natal care or for delivery (Jesudason and Chatterjee, 1979; see also Jeffery *et al.*, 1984; Khan *et al.*, 1982 and 1983a).

Women's Life-Cycle and Health

Thus, available information on mortality and morbidity and on the utilisation of health services point to disadvantages to females at three particular stages of the life-cycle: between the

ages of 0 and 5, 5 and 15, and in the "reproductive" period between 15 and 45 years. This poor 'health cycle' is related clearly to women's low status, great responsibilities and work burdens. A female child is eminently dispensable because her mother's status depends on the bearing of sons. First-born female children, those born after a succession of births (i.e of high birth order), or after one or two other female children are "unwanted." The care and feeding of preschool girl children are less satisfactory than that of boys. A higher incidence of malnutrition among female children is found ubiquitously by surveys and micro-level studies, and their lower receipt of health care has been discussed earlier.

School-age and pubertal females (5-15 year olds) continue to suffer from inadequate nutrition and a lack of medical attention. By the age of five, young girls are most likely already participating in the 'domestic work force.' The wide variety of tasks they undertake are energy-demanding, and yet, according to the National Nutrition Monitoring Bureau (1981), only half of all children between 5 and 15 years receive adequate nutrition.

Young girls' participation in domestic work also has unfavourable repercussions on schooling. In 1981, only 32 per cent of 5-9 year-old and 38 per cent of 10-14 year-old girls were attending school (Office of the Registrar General, 1982a & b). In the past, only 30 per cent of those who have entered Class I have completed Class V, with the largest group "dropping out" between Classes I and II. A national-level survey in 1978 showed that the percentage of girls attending school increases with each year between the ages of 5 to 9 years—but then drops rapidly by age 14, so that only a quarter of girls between 12 and 14 are in schools (NCERT, 1980). The low enrolment of girls in schools also deprives them of the school meals, school health programmes, and hygiene education that are vital to their health.

The 1978 survey found that while 63 per cent of boys in the 5-14 year age group were literate, only 44 per cent of girls were. Gender differences in literacy are more pronounced in rural than in urban areas. While rural areas of all States had higher than 40 per cent literacy among boys of this age group, eight major States showed females to be less literate

than this (all-India) average level: Rajasthan, Madhya Pradesh, Jammu and Kashmir, Uttar Pradesh, Andhra Pradesh, Bihar, Orissa and Haryana. These States together account for well over half of India's female population.

During the secondary school years, many girls are betrothed not even having achieved minimal literacy. Yet the evidence that schooling is one of the most important "correlates" of 'successful' motherhood is compelling. The Survey of Infant and Child Mortality (Office of the Registrar General, 1981) showed that literate mothers suffered four out of ten fewer deaths among their infants than did illiterate mothers in rural areas.

The education of girls could also lead to their greater employment in adulthood. Women's employment may exert a positive effect on the health and survival of children as discussed in Chapter 3.

Education and employment also raise the age at marriage of women, another factor associated with better infant survival. The Survey of Infant and Child Mortality found that women who married after the age of 21 years experienced only two-thirds the rate of infant deaths compared with those who married between 18 and 20 years, and half the infant death rate of those who were married before 18 years of age (Office of the Registrar General, 1981).

However, the majority of women are married early and experience early motherhood, entering the "reproductive age group." Sixteen of a woman's 30 reproductive years may be spent in pregnancy and lactation (Ghosh, 1984). Early, repeated and prolonged childbearing coupled with inadequate feeding and heavy work results in severe nutritional depletion. "Pregnancy wastage" is high and there is a high risk of obstetric complications for both mother and child. Besides these physical burdens, the health problems of women at this stage of the life-cycle also encompass emotional and psychological stresses. Women are socialised to downplay their illnesses and social taboos bar contact with outside health care providers.

Women's life expectancies at different ages reflect this cycle. At birth, females have a life expectancy of 44.7 years, about 1.7 years less than males. By age 10, their life expectancy has

risen to 57.7 years but remains 1-1.5 years behind males until the age of 40. After this they begin to have a life expectation equal to or greater than that of men. Although women's health needs emanate from biology and ecology, and are exacerbated by unfortunate social values, coupled with economic adversity, there is ample evidence e.g. from the experience of Kerala that female morbidity can be reduced by improving their access to health services (see Chapter 8). Furthermore, a high proportion of child deaths are brought about by problems which can be traced to maternal health, nutritional status, parity, and obstetric care. Other causes of child deaths are amenable to simple health service interventions, or could be averted by proper preventive health care. The linkages between child health and women's access to health care are manifold (see Chatterjee, 1983) and thus for health improvements to be effected in both "vulnerable" groups—women and children—women's access to health services must be substantially increased.

Women's Access to Health Services: A Conceptual Framework

The issue of women's access to health care is a complex, multidimensional one. On the one hand, it is an "independent" or "explanatory" variable, a determinant of the health status of women and of family members in their charge (particularly children, but including husbands and the aged). Although the latter groups may be independent users of health services, they are dependent on the woman of the household for their immediate health needs. Thus, ultimately, a woman's access to health care could determine the economic viability of a family. On the other hand, access to health care is also the outcome of women's status in society, including society's response to the health needs of women. Thus, it is a 'dependent' variable, leaning on women's social standing, their intra-familial status, their economic level, as well as on the availability of health services. It is virtually impossible to separate these several dimensions. Instead, one can group them into four broad arenas which together determine women's access to and utilisation of health services: *need*, *permission*,

ability and *availability*. These factors interact to produce *use* of health services in the following manner :

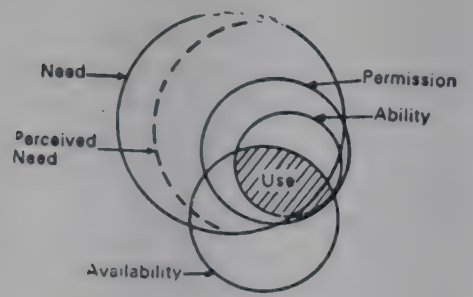

FIG. 1. *Factors Determining use of Health Services.*

Need is the extent of ill-health among women (and among family members), and is a measure of the extent to which women must seek health care. It is determined largely by economic and environmental factors, as well as human biology. In Indian society, where women are conditioned to tolerate suffering, actual need (i.e., medically-defined need) is mitigated by perceptions, and is thereby reduced to "perceived" or "felt" need (shown in the figure as a subset of need, by a hatched line).

Permission refers to the familial, communal, and societal norms that dictate whether a woman can or cannot seek health services. Often these norms are explicit—in the form of social taboos (such as those pertaining to menstruating or post-partum women), a mother-in-law's mandate, etc; or they may be implicit in women's conditioning to bear suffering, to fear ridicule on admitting illness, or to anticipate chastisement if she were to express a desire for medical treatment. Permission is thus very much a function of women's social status.

Ability is the extent to which women can approach health services, depending mostly on their economic status. With their "double burden" of employment and household chores, there are serious 'tradeoffs' between women's economic and domestic responsibilities, and the time, energy and expense of seeking health care. The compromise achieved would be determined by the economic status of the family as a whole—the availability of alternative wage-earners, childminders, etc. Social norms also operate to determine ability, and so women who are able to seek health care are a sub-set of those who are 'permitted.' As before, some of these may not have actual need. To use an economic term loosely, the processes of 'permission' and 'ability' act together with 'felt' need to result in *demand* for certain health services, some of which may be 'unnecessary' or 'spurious' demand.

The *availability* of health services in general and specifically for women is the main 'exogenous' factor determining women's access to health care. The location, nature, and quality of services and associated factors such as the behaviour and attitudes of service providers are of major importance. Services available may not be totally consistent with existing health problems or need. Where ability to seek health care and availability of services (i.e. supply) overlap, *use* of health services or "effective demand" occurs.

The preceding sections describe *need* in terms of women's mortality and morbidity and of child health problems, using macro-level data and information from micro-level studies. Based on clinic attendance and household-level surveys, *use* has been shown to be far short of need. The issue of improving women's access to health care is precisely to make their use of health services commensurate with need. The circles of perception, permission and ability must be enlarged to coincide with need, and availability must be totally congruent with it. While the major responsibility of the health sector lies in the arena of availability, it can also be instrumental in bringing about some of the societal changes which are required to modify the arenas of ability, permission and need. Although broader changes lie outside the realm of health programmes, they are nevertheless important aspects of health policy.

Availability of Health Services for Women

Past Traditions

The situation of women's health services prior to the advent of 'modern' health policy-making has been described in detail elsewhere (Chatterjee, 1984). The traditional Indian systems of medicine were male-oriented and male-dominated and largely ignored "women's diseases" (Jeffery *et al.*, 1983). The only traditional medicine available to women was in the hands of *dais* who dealt mainly with obstetric events.

The spread of modern medicine in the colonial period was confined largely to towns, and hence had little impact on women's health at large. The establishment of funds, nurses' training schools, and a few *dai* training programmes in connection with the women's movement or as missionary work in the early part of this century increased the availability of female health personnel practising modern techniques. However, the expansion of women's medical facilities was limited by a paucity of women doctors, and there were only isolated efforts to improve the availability of women's services in rural areas.

Post-Independence Developments

Rural health services developed in the post-Independence period following the recommendations of the National Planning Committee (1948) and the Bhore Committee (GOI, 1946). Both reports gave high priority to maternal and child health and launched the development of these health services. The major thrust over the past 35 years has been on the provision of Maternal and Child Health Services through the training and deployment of a cadre of Auxiliary Nurse Midwives (ANMs). The First Five Year Plan initiated the establishment of sub-centres (one for every 5000 people), staffed by ANMs, and Primary Health Centres at the block level. The training of village *dais* for MCH work was also recommended. During the Second Five Year Plan, MCH services became an integral part of overall health services in rural areas. The Third Plan focused on the improvement of services at the PHC level, and at district and sub-divisional hospitals. This Plan also saw a considerable increase in the financial allocations to

family planning activities, which gathered momentum with the introduction of time-bound targets in 1966. Since then, official policy has greatly favoured family planning over MCH services, to the latter's detriment.

However, as it has become clear that the high fertility of Indian women is related to the high mortality of their infants and children, attempts have been made since the Fifth Plan to re-integrate family planning with Maternal and Child Health (MCH) services. Significantly, however, in this effort MCH was transferred to the Department of Family Planning, instead of the reverse! Thus, former MCH workers became responsible for family planning targets and began to view contraceptive motivation and performance of female sterilisation operations as their main duties. With their responsibilities to meet targets, and in the absence of concurrent (or, preferably precedent) 'MCH targets,' they have largely neglected MCH work.

More recently, the realisation on the part of government planners and policy-makers that the established centralised system of health service provision is not reaching most of the country's needy has led to the introduction of schemes to increase community-based health care. Comprehensive health care was intended to replace the vertical disease control programmes and family planning drives of the 1960s and early 70s. Decentralised health care began in 1977 with the Community Health Workers' (later Health Guides') Scheme, and the *Dai* training programme was another outreach scheme initiated specifically to provide better domiciliary maternity services.

Current Status

Although there are women-specific health services, including Maternal and Child Health care, Medical Termination of Pregnancy (MTP), the Postpartum Programme, and so on, which are enumerated in reports of the Ministry of Health and Family Welfare, the availability of health services for women cannot be inferred from the usual statistics of health facilities and manpower. Data on allocations to or expenditures on women's health services are not available nor deducible. Tabulations of numbers of services delivered or percentages of targets met almost always lack "denominators" which would allow calculations of coverage or effectiveness. Furthermore, there have been no

attempts to evaluate the impact of available services specifically on women's health. For these reasons and in view of the foregoing discussion on low use of health facilities by women, it is perhaps more appropriate to examine some qualitative parameters of health services for women.

Maternal and Child Health services at the Primary Health Centre include : antenatal, delivery and postnatal care, including diet supplementation of pregnant and lactating women. mothercraft and hygiene, surveillance of children under five, immunisation and health education, in addition to obstetric, gynaecologic and pediatric services. The staff involved in MCH activities at each PHC consists of one or two Medical Officers, up to two Public Health Nurses and/or Lady Health Visitors, and four to ten Auxiliary Nurse Midwives (ANMs). Each ANM, along with a trained *Dai*, manages one peripheral sub-centre, at which basic MCH services are to be provided and from where "difficult" cases are to be referred to the PHC.

The general health problems of women have been subsumed into disease categories which are tackled by 'general' health staff at health centres, or addressed by the vertical disease programmes. The extension workers connected with the national programmes against malaria, smallpox, tuberculosis, and so on, were formerly unipurpose workers, but more recently have been renamed "Multipurpose Workers" (MPWs). This includes ANMs who are now "Female MPWs," expected to cater to women's health needs by dint of being women themselves.

Despite the investment made over the past 30 years in the health infrastructure, neither the PHC staff nor the ANM at the sub-centre can effectively cover their target populations. To give just one example of this lack of coverage, only a few per cent of deliveries are attended by a trained person. Institution-based medical care remains inaccessible to the majority of women and children and achievements in preventive and promotive health, even in the area of maternal and child services, are far below requirement.

Tracing the development of health services through the five year plans, Rao and Kumar (undated) assessed the availability of manpower such as doctors, nurses, ANMs and LHVs. The picture has consistently been one of gross inadequacy to deal with the country's female population. Of particular concern is

the country's low output of nurses. There are currently 200,000 nurses (with various levels of training) in the country, 60 per cent of which are concentrated in urban areas. There are two doctors for every nurse, a peculiar reversal of rational health manpower policies—particularly in view of the need for health services to cater to women and children in rural areas. To obtain the desired ratio of one nurse per thousand population, the country needs almost four times the current number of nurses. The low status, poor working conditions, and low wages of nurses, coupled with inadequate training to deal with the problems of women in rural areas, severely constrain proper development of the nursing profession which is vital to women's health care. ANMs posted at sub-centres usually come from outside the village and face problems of 'accommodation,' of safety, and of job satisfaction which hamper their liaison role. At the PHC level, the availability of basic amenities can overcome some of these problems, but women doctors are still in short supply in rural areas. By and large, the need is to ensure proper infrastructural and psychological support for women health workers. This in turn raises the need for the participation of women in overall health service planning, decision-making and policy formulation.

One reason for the lack of coverage by government health facilities is that little effort has been expended to overcome the constraints of 'permission' and 'ability,' and encourage use of the facilities. Household surveys of people's awareness of governmental health services paint images of PHCs as "dispensaries with facilities for sterilisation or difficult deliveries" (Jesudason and Chatterjee, 1979). Few people are aware of the preventive and promotive services being offered, even of immunisation or of antenatal care. The acceptability of institutionalised health care is certainly hampered by a conflict between traditional community values and those of modernised extra-familial institutions. Besides, few women have the time, mobility, travel facility, money and child care alternative required to travel to a PHC or hospital several miles away. Thus, when those who do are led to complain of long waits or unpleasant behaviour of staff, other potential clients are lost. Frequently services available at the PHC are considered inadequate (e.g. medicines in short supply) and there are often reports of

government staff charging for medical services which are supposed to be free. Another reason why women stay away from health centres is the perennial fear of being recruited for tubectomy.

A fundamental problem is that the approach to women's health services has been based on the perception that motherhood (pregnancy and lactation) and fertility are the overwhelming—or even the sole—health concern of women. In this preoccupation, the broader parameters of women's health needs have been obscured, and the issues underlying their lack of access to health care largely ignored. Thus, the health system has failed to perform the two main roles outlined for it in the foregoing discussion—diminishing the constraints of 'permission' and 'ability,' and making availability congruent with need.

In order to do so, female personnel concerned with women's health must be deployed effectively both at health centres and in the field, and trained to be responsible for "holistic" health, which includes curative, preventive and promotive services delivered "at the doorstep." The use of village 'resource people' for basic health tasks is a step in the right direction towards increasing women's access to health care. However, although both the CHW Scheme and the *Dai* Training Programme were adopted at the national level only after sufficient evidence of their potential to improve health had been accumulated in pilot schemes, the official programmes have been rife with problems.

Dai Training Programme. Dais are perceived as an important health asset because they are village-based and involved in the critical task of midwifery (Kakar, 1980). There is a rich anthropological literature on their roles and functions which demonstrates great variations in different cultural settings. Recently, a detailed account of the role of *dais* in childbearing in some U.P. villages has been provided (Jeffery *et al.*, 1984). In this field study, almost all women gave birth at home attended by an untrained *dai*. However, there was little or no contact between a pregnant woman and the *dai* before delivery. Although women depended on the *dai* to diagnose any life-threatening situation, *dais* were not considered experts and few had any previous training or apprenticeship. Their roles were largely confined to doing the "dirty work" during

and immediately after the delivery. In this situation, the *dais* had virtually no role as community healers because they lacked specialised knowledge and had only very short contact with the pregnant woman. Twenty per cent of the *dais* observed by the Jefferies deviated from this stereotype—they were intelligent, trained, well-reputed, practised some form of "medicine" (e.g. gave injections) and had busy, lucrative practices. However, they too had limited 'outreach' and did not educate their clients in health matters. Nevertheless, this more positive view of *dais* obtains in certain other locations (e.g. in the Punjab, according to Kakar, and in Tamil Nadu, according to Mathews, 1979).

It is believed that there is at least one traditional *dai* in every village in India, so that the total number would be over a half million in the country. Although the concept of training them in better techniques goes back more than a century, the official programme to utilise *dais* to provide "modern" village-based maternal and child health and family planning services was launched during the Second Five Year Plan (1957-62) and sustained through the Sixth Plan. However, the numbers trained have been consistently about 40 per cent short of the targets set in each Plan. At this juncture to reach the proposed ratio of one trained *dai* per 500 people seems a most unlikely feat as over 1.2 million *dais* would have yet to be trained.

Qualitatively, as well, the programme has fallen far short of its objectives (see e.g. Mani, 1980; Bhatia, 1982a, b). There have been grave difficulties in recruiting suitable *dais* into the programme. Typically a supply rather than demand-oriented programme, no felt need has been created either for the training or for trained midwives. Nor was the programme designed to cater to perceived need. For example, although a demand for certain services such as post-partum care exists, it has not been considered in programme design. More attention to practical aspects of pregnancy, deliverya nd infant care than to text-book reproductive physiology in the training syllabi would have made the programme more responsive to the needs of women.

Administrative lapses result in a scarcity of trainers, teaching aids and equipment which in turn have led to training of poor quality. Midwives frequently find the courses too technical and too long. They drop-out because training centres are

distant, or because they lose income which is not made up either by incentives during the training programme or by increases in income after training. Indeed, villagers often assume that following training the *dais* have become government personnel who should render their services free—and this, of course, does not suit the *dais* who do the work out of economic necessity.

Finally, follow-up of trainees is virtually non-existent. Midwifery kits are not replenished. There is a lack of rapport between the *dais* and the ANMs who are responsible for maintaining contact. They perceive each other as competitors. Alternatively, *dais* shy away from a relationship with their local ANM because villagers may distrust them in fear of being recruited for sterilisation. The combination of poor training and inadequate follow-up often leads to recidivism to traditional approaches and techniques.

At a practical level, therefore, the *Dai* Training Programme does not meet the needs of women even in the limited matter of childbirth, and an adequate domiciliary midwifery system remains a major lacuna.

Village Health Guides' Scheme. While the village Health Guides' Scheme had the potential to overcome some of the constraints of 'permission' and 'ability,' making health care easily available to women, the scheme faced numerous problems which limited its reach. Initially, the vast majority of Community Health Workers were men. Restricted from approaching and dealing with women, these workers confined their efforts to treating minor ailments and to chlorinating wells. However, following the recommendations of the Central Councils of Health and Family Welfare in 1981, more emphasis was placed on the recruitment of female workers.

Female health guides are potentially effective 'women's health workers' because of their access to the relevant target group, their 'knowledge' of health culture, personal qualities which make them hard workers, and their "apolitical" nature. However, they are rarely accorded the status they require to function effectively. Although a great deal of responsibility can be vested in them, there is also a need for support from more skilled personnel and for linkages to the formal health infrastructure. From their sub-centres, Female MPWs (ANMs)

are supposed to liaise with village health workers to provide health care to women. On field visits, ANMs are charged with responsibility for providing basic health care, and preventive and promotive tasks, including immunisation. However, almost ubiquitously, their family planning responsibilities take over their efforts, and their targets are inevitably handed down to their village-level 'subordinates,' so that the wider task of (women's) health care is ignored by all. As has been alleged, these outreach efforts descend to merely bringing about a "surface change designed to improve the relationship" between medical personnel and rural women (Jeffery *et al.*, 1983), so that family planning work can be given a much-needed boost. Whether or not this is intended, it is true that in practice the high priority accorded to contraceptive motivation work, and the shortage of female health personnel has severely restricted any effort "beyond family planning." "Antenatal" care has succumbed, as it were, to "antinatal" policies!

Future Strategy

Taking Cognisance of Health Behaviour

Throughout health policy-making in India, health has been viewed as an "individual responsibility," so that the focus of health care delivery has been the individual. A health system based on a network of curative centres presumes that individuals will present themselves for diagnosis and treatment when ill. Although it is clear that the health system has failed to make an impact on the health needs of women, this is ascribed to the intransigence of society rather than to any systemic inadequacies. However, the very intervention of factors such as 'permission' and 'ability' between women's needs and their use of health services points out that women (and, obviously, children) are not able to demonstrate the individual behaviour which the current health service pattern requires, and that this philosophy on the part of health planners is therefore inadequate.

Recent attempts to combine the 'centripetal' system with schemes that reach out to the periphery have devolved responsibility for health onto the village "community." However, several difficulties encountered by schemes such as the

Community Health Workers' Scheme (e.g. the tendency of workers to cater to only some sections of a village population or perform only particular tasks) suggest that the social heterogeneity of a village poses problems in ensuring a distribution of health benefits, including those to women. Although community-based health care is a step towards the necessary decentralisation of health services, the current focus on the village as the unit of health care delivery may once again prove inadequate to deal with the country's health problems.

Admittedly, the strategy for community health includes a focus on "vulnerable groups"—children under 6 and pregnant/lactating women. Although it is useful from a medical point of view to constitute groups of people with common needs using physiological criteria, these groups have little in common beyond their physical description, and the objective of creating an identity among them is defeated by divisive social, economic and cultural forces. Thus, in practice, when such criteria are used, the individual rather than any "homogeneous" group once again becomes the unit of health care delivery. It is therefore more appropriate for the purposes of health improvement for these individuals to be viewed within the context of the grouping that has the greatest influence on their health status: the family or household.* Indeed, the concept of the "vulnerability" of these individuals is derived from their relative neglect within the household. This neglect is often explained in terms of the family's primary concern for survival as an economic unit, which has important implications for health.

To illustrate the importance of the household, one can consider the problems that most frequently affect children of preschool age : malnutrition, gastro-intestinal infections, and respiratory diseases. Although it is the individual child who is afflicted, the causes of his or her condition lie in his/her immediate surroundings, the home; and beyond that, to the

*Although aware of the debate on definitions, I use these terms interchangeably to mean a group of people (related by blood or not) who live within the same dwelling unit, share health-related resources, and take decisions that affect the health of individuals within the group or of the group as a whole.

village (or urban) environment. The approach to the child's illness and treatment must take these environments into account. Another example is the pregnant woman who is the desired subject of antenatal examinations and advice on diet, hygiene and physical precautions to observe during pregnancy. If she were to practice this advice it would be in the context of her home, within which food is acquired, cooked and eaten, cleanliness observed or labour divided. Unless these are taken into account, the advice would be infructuous.

Thus, most conditions affecting health, health practices and decisions concerning health care lie within the province of the household rather than at the "community" level (with some important exceptions such as drinking water supplies, waste disposal, or vector-control operations). The amount of food available and eaten, the treatment of sick persons, the number of children conceived, born or nurtured, are determined by the family or household acting within its particular socio-cultural context. Therefore, it is this unit that would constitute the most effective unit of health care delivery. Although a recognition of this is still far-removed from an ability to design effective health programmes, an understanding of the many dimensions within the household that affect health can provide a basis for health planning.

The Household and Health

Anthropologists describe the household variously as the unit of production, consumption, residence, reproduction, socialisation or a combination of these. When considering health and nutrition, one finds that all these facets of "household" are germane (Chatterjee, 1984). Household production dictates health because the resources gathered determine the capacity of its members to acquire 'health goods and services.' Household consumption and, particularly, the intra-household distribution of 'consumables' such as food, water and clothing determine the nutrition and health status of the individuals that comprise the household unit. Nutrition and health status are also the result of the balance between energy expended in production and that obtained through consumption, and so the aggregate

household 'energy level' is an important determinant of the health of its members.

As a residential or dwelling group, the household is the immediate health environment of its members who "share" a common water source, sanitation facilities, breathing space, a hearth, and other facilities. This has important implications for the acquisition, transmission, prevention and treatment of disease. As a reproductive unit, the household determines the number of children to be born within it. Child-bearing directly affects the health of reproductive women, and indirectly the health and survival of other children. Ultimately, the size of the household determines the per capita availability of resources—and thereby the health of all its members. Finally, as a socialising unit, the household is responsible for the acquisition, transmission and use of health-related knowledge. Mental development and mental health are also important outcomes of the socialisation that takes place within the household.

Health and nutrition outcomes depend both on the composition of the household and on its organization. Any inhabitant of a household has an effect on its health status and implications for its health care because all individuals (a) have a health profile themselves, (b) can be agents who transmit disease or prevent it, and (c) could (in theory, at least) be responsible for providing health care within the household or acquiring it from outside.

At this point, a caveat is in order. Although the household is itself a complex system of cooperation, it is in turn linked to other households and institutions around it. Certainly, any examination of its health status must pay heed to the environment—physical, social, economic and political—in which it functions. Of particular concern are the agents and agencies from which it derives its food (nutrition), its water, its hygiene, and its knowledge, which are all important determinants of health, and the health care institutions with which it interacts.

Women as Guardians of Household Health

Health status data and the concept of "vulnerable groups"

demonstrate that even within the household there is 'differentiation'—by gender, age, role and so on. This heterogeneity has important implications for health because it is usually associated with different sets of standards for different people. For example, external health care may be sought more for males than for females, or for adults more than children. It is this differentiation within the household that focuses attention on women—in terms of their health problems and needs, as we have already discussed, but also with regard to their roles and responsibilities in the sphere of health (Chatterjee, 1984).

Within the household, women assume a number of responsibilities beyond their familial roles. Besides being daughters, wives, mothers or mothers-in-law, they are also labourers, producers, cooks, cleaners, child-minders, nurses and so on. Traditionally, intra-household tasks related to health and nutrition have been almost exclusively the preserve of women. The provision of nourishment and maintenance of hygiene are women's responsibilities. Women also undertake the personal care of family members, care and supervision of young children, and of the sick—whatever their age or gender. This variety of roles makes them the 'guardians of health.'

Because of these multiple responsibilities, one might assume that women make the health-related decisions within the household. However, little is known about the process of health decision-making within the poor rural Indian household. The oft-made assumption that household decision-making takes place as an apparent and concensual process (Anker, 1978) is not easily acceptable in the Indian context. Instead, processes of decision-making vis-a-vis health and nutrition are most likely tradition- or rule-bound rather than 'active' or 'informed.' Thus, the nature of health decisions made by women in the household are probably a function of their status within the household and society. We know that this in turn is related to women's educational levels and employment status.

Women's Education and Household Health

There is substantial evidence that women's education plays a major role in determining health (see Chapter 3). At the macro-level, cross-national studies show high correlations

between female literacy and life expectancy at birth, higher than any other factor (UN, 1983). Caldwell and others have analysed micro-leval data on education and child mortality and found that mother's education influenced child mortality regardless of her age, socio-economic background, or current status (Caldwell, 1975, 1979). The mortality differentials by maternal education could not be ascribed to the better socio-economic situation of educated mothers. Furthermore, place of residence, access to health facilities, and father's education did not have much significance, and Caldwell concluded that "in terms of child mortality, woman's education is a good deal more important than even her most immediate environment." Similarly, data from Bangladesh show that, although all household educational levels (the highest, that of the head of household, and of the mother) bear an inverse relationship with child mortality, the effect of mother's education is the strongest (D'Souza and Bhuiya, 1982). The mechanisms whereby women's education results in lower child mortality are still the subject of speculation. Child health and survival are enhanced by better hygiene, improved nutrition and feeding practices (of the child as well as of the mother), and timely medical intervention, whether in the home or at a health centre. Educated women may be more aware of how to treat children during illness, more knowledgeable about health facilities, or more able to take decisions that enhance their children's health status and chances of survival. While the assumption that mothers are the main decision-makers and "managers" of their children may be far from accurate in many contexts, women's education may result in significant changes in family relationships such that children (and the women themselves) get a larger share of the family's resources. Levine (1980) has proposed that schooling is a form of "assertiveness training" which enables women to form their own opinions and act on them, believe in the efficacy of their actions, and not be intimidated by others. An educated woman thus takes greater responsibility for her children's health and is permitted to pursue appropriate strategies by other household members. There is also the likelihood that educated women may "choose" or acquire better educated husbands who share values inherent in taking better care of children, or that they may influence their husbands and mothers-in-law more in

this regard. In support of this, an indepth investigation of the relationship between female education and lower child mortality in Bangladesh (D'Souza and Bhuiya, 1982; Chen, 1984) showed that intrafamilial decision-making processes do indeed change with the education of women.

Another way in which education improves child health—and that of women themselves—is through its impact on child-bearing behaviour. Decisions to delay child-bearing, space children further apart, or bear fewer children enhance child health and survival. Cochrane (1979) reviewed several studies in developing countries and found a strong inverse relationship between women's education and fertility.

Women's Employment and Household Health

Increased female employment—which may result from increased education—also leads to lower mortality and fertility. Schultz (1979) analysed data from Colombia and concluded that mothers' education acted through increases in income to decrease child mortality in urban areas. However, he found that in rural areas women's wages were less strongly associated with child mortality, than with their education (although this was qualified because only a small proportion of women in the sample were in wage-earning occupations). This relationship assumes that women are the decision-makers regarding the disposal of their incomes and that their wages are used to "purchase health goods and services." In the Indian context, both assumptions are questionable.

While no negative effects of higher education on health have been brought to light, there is some cause for concern regarding women's employment. For example, the Registrar General's Survey (1981) found higher mortality rates among infants of working women (whether 'agricultural' or 'blue collar' workers) than among infants of non-workers. The difference was particularly large in urban areas, and persisted even in the state of Kerala. Unfortunately, these data were not controlled for economic status and so may reflect the fact that female workers were of lower economic status. The explanation for the negative effect of employment may lie in the 'competition' that often occurs between women's paid work and domestic responsibilities. Among employed women less time may be

spent on health-related tasks, and this may have unfortunate negative effects on child health. When getting medical attention means a time-consuming trip to a health facility and wages are jeopardized, health care is not likely to be sought. In situations where the economic survival of the family depends on the woman's work, she is unlikely to leave her work to care for a sick child. These negative effects may not be adequately offset by the increased quantity of food or the better standard of living which the woman's income purchases for the household.

The finding that 'agricultural' workers fared better than 'blue collar' workers pointed to the lack of child care facilities for women in the organised labour force. The scenario of women having to lock their infants and young children up in their homes to go to work is not an uncommon one. These facts drive home the need for women's employment strategies to be accompanied by efforts to enhance household access to child and health care facilities.

Another caveat. Within the household, child care—in health or sickness—may be delegated to a member other than the mother—with potential negative consequences. Often, the substitute child-minder is a sibling, barely six or seven years old herself, ignorant and incapable of looking after a well or sick child, or an aged person unable to spend the energy necessary to feed, clean, or comfort a young child.

While women's double burden of domestic and productive work is immensely relevant to health within the household, yet another aspect of the sexual division of labour relates to their access to external health care. The paradox of traditional societies is that while women are responsible for 'primary' health care within the household, they are not 'permitted' to carry this responsibility to its logical next step, seeking professional help from external health care providers. This 'discontinuity' in women's roles in health care provision has important implications for health policy and planning.

Directions for Policy

The foregoing discussion can be summarised as follows : women and children are severely disadvantaged in health matters, for

which the household has first level responsibility. Within the household, women are the main health care providers, but they are limited in their access to external health care institutions. Women's education and employment status affect both the quality of health care provided within the home and the degree to which outside help is sought and utilised, reflecting on their own health and that of other household members. Given the poor health status of women and children, policies must be oriented to providing them the necessary health care in an accessible manner. And given women's responsibility for health maintenance and sick-treatment, policies must also aim to build women's competence in these areas.* While it is clear that policies in many sectors—health, nutrition, family planning, education, employment and others—are relevant, the health sector bears major responsibility for providing care and building competence, so I shall focus particularly on its role.

Adopt the household as the unit of health care delivery. Despite the strength of association between 'household' and 'health,' a focus on the household has eluded health planners and practitioners. However, given the inadequacies of the "individual-oriented" and "community" approaches, health planners would do well to follow anthropological practice and adopt the household as the primary unit of health care.

A household-oriented approach would focus on the specific health problems that impair the functioning of the household as a unit and its (short- and long-term) economic viability. It would be concerned with the intra-household distribution of health resources and the members who are most disadvantaged, investigate factors that determine health such as hygiene, availability of food, knowledge about health and child care, and access to external health services and seek to improve these. Thus an operational view of the household as the main point of delivery for health care would be considerably different from the concept of target groups for health programmes and from the "community as the entry point" for health. As a key health resource, women's roles in health care provision would

*The use of the word 'competence' is not at all intended to imply that women are "incompetent" in matters of health but rather to signal the need for policies to deal with factors underlying health.

be acknowledged, and emphasis placed on aiding women to fulfill this role for the betterment of the health of the household.

Focus on women as "providers" and "beneficiaries" of health care. A primary, preventive and community-health approach must necessarily focus on women as the providers of first-level health care within the household. However, the National Health Policy Statement is silent on the specific issues of *reaching women* in order to improve the health status of the population and of *employing women* in the health sector to cater to the needs of other women at all levels of the health system. These issues are central to the Policy's proposed three-pronged strategy for achieving universal health. In the absence of specific suggestions for innovation, one is led to believe that the policy will be implemented through the only extant programmes which are intended to provide health care at the household level—the *Dai* Training Programme and the Village Health Guides' Scheme. In view of the lack of evidence to date that these schemes have had any positive impact on the health of women and children, their serious deficiencies would need to be corrected if policy objectives are to be met.

A household focus would require a reorientation of these community health personnel. The *modus operandi* of field workers must be the home visit on which they can examine household health in its totality, influence its dynamics through dealings with the 'decision-makers' and main actors, and provide the necessary linkages to 'health goods and services.' Some examples of this approach already exist in the country. The Integrated Child Development Services Scheme has made a beginning by focusing the efforts of a primary level worker on women and children (see below). Some private voluntary sector health programmes in different parts of the country have developed techniques and methods (e.g. the "family folder") which have shown success and are worthy of emulation. With proper reorientation, basic female health workers could effectively provide household-level health care.

Given the gross 'underutilisation' of health services by women—alternatively, their "lack of access" to them—it is incumbent on the health system to increase the availability of services (i.e. their supply) and to improve awareness of them

(i.e. demand). To do the latter the health system must itself become more aware of the factors that constrain 'ability' and 'permission,' as well as of those that limit perception of need. Although removing these factors completely may be a long-term development issue, the health sector can take steps to aid and accelerate the process by providing information and educating the people. In this process (as well as in the planning of supply), there is a need to 'consult' women as consumers of health services. Existing women's organisations (e.g. Mahila Mandals) could be used more effectively both for communication and consultation. These organisations must be spurred on to provide a supportive forum for women to overcome their inhibitions towards obtaining health services.

Improving demand, however, is purposeless in the absence of improved supply for which several steps need to be taken. Health centres must be located where need is greatest and where women can approach them—and not based on 'political' decisions. Attention must be paid to regional differences in the adequacy of services, training of higher level personnel, and the deployment of women at all levels including in decision-making positions. While the provision of an adequate referral infrastructure is important, the supply and staffing of "primary-level" institutions is paramount. Female health functionaries (particularly extension workers) must be made more effective. There is a need for larger numbers, better training, better support systems, improved status, and greater motivation. There is scope for better management. Women's needs and "demand" must be met by women because 'permission' is limited by the fear of contact with male personnel. In addition to improved expertise, the attitudes of personnel towards catering to women must change. They must go out and identify women needing health care. A change in their attitudes could in turn change societal perceptions of women's health care as a "waste."

In order to plan health services for women a complete and accurate picture of the health problems of women based on community-wide morbidity surveys must be obtained. Such surveys are virtually non-existent and it is not adequate to infer needs at the local level from macro-demographic data.

Inherent in this requirement is the need to include all women in the household in health development efforts. Although the terms 'mother' or 'maternal' are sometimes applied to all women in the reproductive age group (15 to 45 years), there are major reasons why the ambit of health programmes concerned with reducing female and child morbidity and mortality should be extended to *all* women including young girls and 'grandmothers' who are important members of their current or future household. Besides physiological functions, psychological preparation for family-building occurs in the pre-pubertal period and decisions about education, marriage, first conception take place. Grandmothers/mothers-in-law who are excluded from MCH programmes because they have ceased reproduction, exert powerful influences on child care practices and decision-making within homes.

Furthermore, as we have seen, it is not adequate for health services to consider only the reproductive and maternal health of women even if the prime concern is with children, as "motherhood" is intricately linked to other aspects of women's health. Thus there is a need to gather information beyond women's reproductive histories to include general health problems, other women-specific health problems, health service utilisation and information about women's attitudes to health problems and services. Data gathered must be put into the context of women's "status," including place of residence, type of household, education levels, employment and so on. Knowledge of the interrelationships between women's health, nutritional status, family formation patterns, and socio-economic factors can help achieve a comprehensive understanding of their needs and evaluate how the services are meeting women's needs.

Put Family Planning in its place. The evidence of conflict between traditional norms and practices and state policies is most obvious in the arena of family planning. For at least the past two decades, sterilisation has been the premier method of contraception promoted in the National Family Planning Programme. A "one-time" method such as sterilisation is deemed appropriate because of the problems of access to women in rural areas, their illiteracy, their lack of time to travel frequently to health centres, and their lack of

privacy within joint or crowded households. However, a story of the repercussions of a tubectomy operation on a family by Pettigrew (1984), poignantly illustrates the failure of policy to take into account realities facing rural women.

Women who have undergone tubectomies frequently experience post-operative pain, but this is not accepted either by society or the medical profession as a legitimate complaint. Consequently, women must continue to perform their laborious tasks following tubectomy although they may need and want to rest. Pettigrew has described the nature of these tasks, collecting fodder and firewood, making dung cakes, caring for animals, collecting and preparing food, doing agricultural work and so on *ad infinitum* and the amount of bending and stretching and exertion involved in them. In the incident, a woman labourer who had undergone a tubectomy was in severe pain but was forced to work in the fields at harvest time, and to collect firewood and fodder as usual. There were apparently no other members in the household to take over her work. Under the circumstances she expected her eldest child, a 13-year old daughter, to help; but the child—already engaged in paid work herself—was apparently "playful." This enraged her mother who kicked and beat her, causing her accidental death.

The effect on the household—and on its health and nutrition—was profound. The mother had lost her main helper. She had one son and other female children who were too small to labour. She could have no more children because of her tubectomy. After the death of her eldest daughter, she began to foster her only male child by giving him the milk which should rightly have gone to the youngest—a female child who was suffering from third degree malnutrition.

This episode illustrates how family planning policy overlooks the social context, pointing out how concepts underlying policy may be inappropriate. The application of the "small family norm" to the poor rural household where there is a high risk of child death on the one hand and a high demand for children on the other is clearly erroneous. Thus, family planning policy disregards health realities, the vital economic roles children play in the household, and the social demands on women.

Second, the manner in which policy is implemented may be wrong for given the type of work rural women must perform the promotion of tubectomy may be inappropriate. Pettigrew contends that the emphasis on tubectomy has resulted because "doctors" (health planners and policy-makers) are out of touch with the needs and circumstances of rural women and do not consult them. The priority given to sterilisation reflects the preference of state health cadres and medical professionals, and not of women. From a woman's point of view, the goals of family planning policy should be to ensure the healthy upbringing of children and the health of mothers, eliminating unwanted pregnancies by substituting 'contraception' for abortion.

Third, Pettigrew points to the lack of linkages between family planning and health care services—a failure of both policy and implementation. She alludes to the unhygienic clinical conditions in which sterilisations are performed. There is no post-operative follow-up and care although healing is a long process made more difficult by women's work. The generally negligent attitude towards women's health on the part of health service providers can generate intra-household conflicts and the kind of tragedy described here. In the past, women have been viewed solely in terms of their "links." A focus on mother-child and husband-wife links led to the narrow pursuit of family planning objectives with maternal and child health services in adjunct. In the future, health policy must take a "task-oriented" view of women—paying attention to the roles they perform within households and society, particularly to their roles as health care providers.

Integrate Nutrition Care with Health. While nutrition is another priority problem mentioned in the National Health Policy, there is no comprehensive policy for the improvement of nutrition at the household level. Although the system of food distribution through Fair Price Shops and the Food-For-Work and Employment Guarantee Schemes aim to increase the quantities of food available to poor households, their nutritional impact has not been assessed. Besides these, government intervention in the sphere of nutrition consists of supplementary feeding programmes and the Integrated Child Development Services (ICDS) Scheme, an integrated

health and nutrition programme. These are targeted at individuals—young children of pre-school age, those in school, and pregnant/lactating women.

A common problem the latter programmes have faced has been their failure to induce women to attend, once again because of social strictures against women congregating or eating in a public place, or because of their lack of time. Programme designers or workers sometimes attempt to overcome this difficulty by giving the food supplements as "take-home" rations or delivering them to homes. The rations are then often shared among household members—particularly in poor households—and so the programmes' impact on the target group is 'diluted.' Target members are also often faced with "substitution"—they are denied their normal share of the household pot because they receive the external food supplement. As additions to the total household food supply, the rations given are small—usually around 300 calories per day for a young child and 500 for a pregnant or nursing mother compared with an average daily household requirement of over 10,000 calories. Thus, one could conclude that supplementary feeding schemes largely ignore the household context, failing to see a mother or a child as a member of a larger unit or group of kin.

The ICDS Scheme combines supplementary feeding of children and mothers with health check-ups, immunisation, pre-school education, health education of mothers and referrals. A village-based *anganwadi* worker is responsible for enrolling every pre-school child and pregnant women in her village in the programme, for monitoring their health, for providing the above inputs, and for referring those in need of special care to the ANM. Although the locus of activity is the *anganwadi* (day care centre), some workers are motivated to visit homes to "investigate" and "follow-up" their clients. In the households, the workers are able to demonstrate basic health techniques, such as the use of oral rehydration during diarrhoea, to identify households in dire need of food or other inputs, to motivate women to seek health care, and to link them to a health para-professional when necessary. Although not without its shortcomings, the ICDS Scheme holds out some hope in

terms of reaching women and the household and providing the necessary health care.

Policies in Extra-Health Sectors

To meet the health needs of women and households, policy must extend beyond the health sector. Demographic literature has amply illustrated the links between women's education, occupation and fertility, and we have shown that malnutrition, high morbidity and mortality are also related to women's low status, lack of education and employment opportunities. (Of course, these in turn are related to broader issues such as child labour, women's political participation, technology, and so on, which must be left to be dealt with elsewhere). Thus, there are health implications for investments in other areas such as women's education and employment.

Improve Women's Education. Women, especially those in rural areas cannot assert their right to or need for health care if they lack even elementary education. While health education by personnel in contact with women and households is important, many health problems are rooted in beliefs, attitudes and practices which may not be influenced by health knowledge alone. Thus, policies to expand woman's formal and non-formal education are of immediate relevance and concern.

Provide women employment with support services. A focus on the household as the unit of health naturally entails considering its economic viability. In this context, the provision of employment (income) for the economically needy is a necessary health input. Given the known positive effects of women's employment on health, women should be a target of such efforts (especially when they head the household). In view of the trend of declining female participation in the labour force, special efforts must be made to increase women's access to wage work, to the necessary skills, and to the "means of production."

However, in addition to economic need, women's "double burden" must be taken account of. The domestic burden of women must be decreased so that they can avail of employment opportunities, health facilities, and so on. Relief from child care is an important aspect of women's development and so

programmes to provide institutionalised child care (e.g. ICDS and Balwadi schemes) are important. Thus, attention must be paid to providing "support services" such as creches, child care centres, maternity benefits, nutritional support, family health check-ups, and so on, along with employment schemes, to avoid the possible adverse consequences (on child health) of women's employment.

There is also a need to ensure 'compatibility' between policies which affect women and health. For example, both women's participation in the labour force and prolonged breastfeeding are promoted for their contraceptive effects. Prolonged lactation is a traditional method of child spacing, while female employment discourages child-bearing. Each strategy also has its independent benefits—greater women's autonomy and status in the case of increased female employment, and better child health in the latter case. However, these strategies may also conflict with one another : it is difficult for a woman to avail of employment opportunities outside the home as well as breastfeed her baby full-time. 'Compatibility' in this may be ensured by providing maternity leave and benefits, and creche facilities.

The "possible adverse consequences" arise not only from the fact that women are employed outside the home, but also from the conditions under which women work. For example, if women lose their wages or 'job security' when absent, they will refrain from using health services. On the other hand, if access to day care facilities is provided, women could better feed and care for children without straining the economic situation of the household. Linking health insurance schemes to employment programmes will increase demand for health services and improve health. It must be recognised that health is a major factor affecting productivity—including women's—and potentially alleviating the poverty of households.

CHAPTER 5

COMMUNITY PARTICIPATION IN HEALTH CARE

In new prescriptions for national health, community participation in health care is regarded as a basic and essential ingredient (GOI, 1982a; ICSSR-ICMR, 1981). The diagnosis that calls for it is clear. After three-and-a-half decades of building the physical infrastructure for health services, training and deploying manpower of various cadres, and generating the know-how and technology for health care, the government health system is still not reaching a large proportion of the sick, the needy, the 'remote' and the 'vulnerable.' The country's high levels of mortality and morbidity are evidence that the majority of people possess neither the 'goods' for health maintenance (adequate food, clean and abundant water, a hygienic environment, and knowledge), nor have access to the services that could decrease the severity and improve the outcomes of illness. This lack of access is due in part to the centralised nature of health care facilities—only towns and major villages are effectively served by the public health infrastructure, and in part to social and economic constraints to the utilisation of these facilities. More often than not, the poor woman or child in need of medical assistance is physically isolated from, economically unable to, and socially prevented from using such health facilities as do exist. "Community participation" is seen as the way to get around these problems, besides being a 'good' in itself. By vesting certain health functions in the community, the reach of health services

is extended, and the links established thereby between communities and health service providers can increase awareness of and engender rational and effective use of higher-level services.

The slogan "people's health in people's hands" thus has a dual meaning : people must assert their *right* to (i.e. demand) better health, as well as undertake their *responsibility* to assist the process of improving the supply of services. Their participation in the planning, implementation and evaluation of health programmes will allow them to exercise both these complementary roles.

The Origins

Historically, thought and action in the health sector have derived their inspiration from the prevailing development ethos. During the 1950s, when the country was concerned primarily with the establishment of infrastructure and with technological development, the agenda in the health field consisted mainly of building hospitals, establishing medical-scientific capacity, and training doctors. The 1960s emphasised the "diffusion of innovations," leading to the spread of health centres to rural areas and mass campaigns against specific diseases such as cholera, malaria and smallpox, and for immunisation and family planning. The "basic needs" approach of the 1970s saw the expansion of outreach schemes : increased numbers of trained para-professionals, orientation of doctors to rural health, mobile clinics, and the like. This trend in primary health services led to the search for "alternative" rural health programmes in the 1980s. Current development ideology is flush with terms such as 'community-based,' 'village-level,' 'appropriate technology,' 'self-reliance,' 'integrated development' and contemporary approaches to rural health are peppered with the same notions.

Although the concept of community participation may have roots in ancient history and philosophy, it owes its current widespread use in the health sector largely to the Declaration of the World Health Assembly held at Alma Ata, USSR, in 1978 (WHO-UNICEF, 1978). At that conference, primary health care was promoted as the way to achieve a more equitable distribution of health resources and attain a better level of

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health for all. It was defined as care which is "universally accessible to individuals and families in the community *through their full participation* and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination" (italics added). However, as the WHO's promotion of community participation has been greatly inspired by the Chinese experience with community-based health care, one must go back a little farther (Djukanovic and Mach, 1975). Immediately after 1949, China emphasised mass mobilisation for many development tasks to which her political and social revolution was committed. In health, people participated in campaigns to eliminate disease-carrying vectors and improve sanitation facilities and hygiene, thereby eradicating the major diseases and greatly improving the country's health. Following the Cultural Revolution in 1965, the "barefoot doctor" was fostered, part-time health workers were trained and financed to provide basic health services for individual production brigades and commune health centres were strengthened (Chen, 1976). Although China has, indeed performed enviable health, nutrition and demographic miracles, in the desire to propagate its experience, two significant aspects are frequently forgotten. Firstly, mobilisation for health was part of a much wider socio-economic and political upheaval; and secondly, the barefoot doctors were also the outcome and agents of this broad-based political change.

As a result of this and other examples of community-based health care from different parts of the world, the focus of world health planning has shifted from the individual to the community. Echoes of Alma Ata abound in Indian health policy statements, plans, and critical or interpretative analyses. The report of the Ramalingaswami Committee on "Health for All" described an alternative model of health care which "is strongly rooted in the community" (ICSSR-ICMR, 1981). The Revised Twenty-Point Programme called for family planning on a voluntary basis "as a people's movement" (GOI, 1982b), reflecting the recommendations of the Working Group on Population Policy (GOI, 1980b). The 1982 National Health Policy states that "the ultimate goal of achieving a satisfactory health status for all our people cannot be secured without

involving the community in the identification of their health needs and priorities as well as in the implementation and management of the various health and related programmes" (GOI, 1982a). It holds that the success of primary health care will depend on the "building up of individual self-reliance and effective community participation."

Why Community Participation?

Clearly, it is the desire to universalise access to health care that has made community participation an 'ideal' in the health field. In order to be accessible, health services must be spatially and culturally close to people. Indeed, primary health care is, by the WHO's definition, health care delivered in homes, schools and places of work (WHO-UNICEF, 1978). The obvious way to do this is to train health workers who have ready access to these places. For universal health care to be "at a cost that the community and country can afford" reliance on low level technology and labour-intensive strategies is advocated for less developed countries. Hence, health services will be "community-based," staffed by village people.

Certain other attributes of primary health care also make community participation in it desirable. It focuses special attention on vulnerable groups whose identification is made easier by familiarity with a community. It stresses preventive health strategies which can be enhanced through mass mobilisation and mass education. While community-based health workers can deliver curative services and impart some health education, many preventive health activities call for concerted community action. To ensure effective primary health service delivery, the formal health system is supposed to be responsive to the needs of consumers, to be culturally acceptable, and to associate with traditional forms of health care, all of which require an intimate understanding of, and communication with, "the people." This is translated into an explicit call for the involvement of people in the design, implementation and management of health care. Primary health services are also supposed to be integrated with other "community development" services, such as agriculture, education, public works and housing, and communications. A final explicit principle of primary

health care is reliance on available community resources, human and material,

Although current policy and plans espouse these concepts, there is little clarity about the requisite nature of community participation in health, how it can be brought about, and what specific outcomes can be expected. It remains an elusive, perhaps even illusory, goal to the vast majority of those concerned with providing health services and to "the people" themselves. Even where rationale and purpose can be elucidated, 'feasibility' and 'necessity' may need to be examined.

Accordingly, we should clarify what is expected to be achieved through community participation in health. For this it is necessary to define what is meant by "community participation:" In what ways can people participate in health care? For what objectives? One must then examine the strategies proposed to bring about community participation in health : What is to be done by whom? It is useful to recall previous experience, drawing lessons from earlier attempts at eliciting people's involvement. To assess the 'feasibility' of bringing about participation one can ask : Can the expectations we have of the people be met within existing social, economic and political conditions? One can identify some basic problems facing community participation and, perhaps, isolate factors that facilitate, as well as those that mitigate against it. Finally, one should pose the question about necessity. Although it is definitely necessary to improve health in village homes, is "community participation" in its formal sense a *necessary* condition for this? Are there more fundamental *preconditions* to bringing about better health which will in turn elicit community participation, making it a natural outcome of improved access to health services? In fact, are these not preconditions for community participation itself? In the absence of these conditions is community participation something of a red-herring? One must be left ultimately with an understanding of the potential as well as the limits of community participation in the context of rural Indian society and its health determinants and behaviour, as distinct from what is ideal but may not be feasible, or what is simply expedient.

Nature of Community Participation

The spectrum of participative possibilities in health care is wide, albeit discontinuous. At one end, people may simply be passive recipients of information and services which are conceived, designed, delivered and controlled by others. They are, however, "participating" to the extent that they make an effort to avail of these services (i.e. they are exercising their right to them). In some instances, they may contribute to the services in cash or kind, as fees or in the form of insurance premia. Besides deferring the costs of the services, such contributions provide an incentive to the service personnel or act as a 'guarantee' that services will be available.

Another form of participation is the involvement of certain "representatives" of the people in the planning of or decision-making for the health programme which, however, is still implemented by outsiders. Village-level committees may simply be forums for stating opinions and preferences, an advisory board which lets the health service providers know what services are desired by the people, where the health clinic should be located, and so on.

The people may be requested to identify their health problems, needs and priorities so that the health programme is made "relevant" to them and takes into account any constraints faced by its intended beneficiaries. Instead of arising out of the predilections of health planners and professionals, if a health programme is based on local "felt need," it is believed it will be more acceptable, used more effectively and be more satisfying to the people.

Participation can end with such consultation or it can progress toward community action. Services move from being "community-oriented" (i.e. directed at the people) to being "community-based" when the people are "conscientised" and organised to participate in their delivery. However, even involvement in implementation may take a variety of forms. The community (or its limited representation) can select and deploy health workers, identify specific beneficiaries, raise contributions towards the health programme, perform specific health tasks, etc. Towards the most 'active' end of the spectrum of community participation are efforts which require initiative

on the part of the community in the design, implementation, management, and evaluation of the health programme. The ultimate is reached when the community has full control—financial and administrative—over the health programme and is responsible for its maintenance.

Thus, community participation in health care can progress from, 'receiving' to contributing, advising, decision-making, initiating, implementing, controlling and supporting health programmes. It is clear that this is a spectrum of increasing responsibility placed on the people for health care provision. Calls for community participation in health most often intend the entire community to be involved in the planning, implementation, and control of health care. This includes decision-making about programme objectives and priorities, activities and methods: what is to be done, to what end, and how; implementing the decisions; contributing in cash or kind or labour to the programme; sharing in its benefits; and monitoring and evaluating it. It is taken for granted that the benefits to people's health increase with their increasing involvement. Before determining whether such involvement is possible, we shall examine how these benefits are expected to accrue.

Benefits of Community Participation

Community participation is expected to bring about better health in a number of ways. People's health consciousness and knowledge are expected to increase and result in better health practices among individuals, families and communities, in place of existing harmful or ineffective ones. Demand for basic health is expected to ensue and access to health care improve at the same time through the provision of basic health aid by community-level workers "at the doorstep." Stress on preventive measures undertaken at the individual and community levels is expected to reduce the need for curative care while increased awareness of higher-level services encourages their timely and considered use. In this way the problem of "underutilisation" of health facilities is tackled and the distribution of health care "improved." Community participation is also expected to bring about improvements in community level health 'infrastructure,' such as water supply and sanitation, through mass

action. It will also indirectly improve the distribution of available resources through increased awareness of basic needs.

While there is no doubt that each of the above expectations—increased awareness, demand for health care, improved access to services, public health improvements, more equitable distribution of resources, and participation in development—lie on the path to better health, they cannot be easily equated with specific health outcomes. In the absence of ways to measure the health benefits of participation, it is difficult to 'evaluate' the effectiveness of community participation as a strategy for health. The strategy has, however, gained credibility from experience in the non-governmental sector. Many voluntary health agencies which have succeeded in reducing mortality, morbidity and fertility consider people's participation a key to their success (see, for example, ICMR 1980). In order to assess the viability of the strategy of people's participation in government health programmes, therefore, it would be well to look at these experiences, examining, especially, who participates.

Who Participates?

Efforts to elicit community participation in health care hav
been widespread in the non-governmental health sect
although each is admittedly on a small scale.* A com
approach begins with a meeting of project personnel (
always outsiders) and village leaders (usually pa
members) to solicit support for the proposed health wo
cipation in the dialogue may be enlarged to include
village social organisations, such as mahila ma
mandals, and krishak mandals, and key villa
tionaries, such as school teachers and post-m
by definition, these people represent the "rul
village. Although the voluntary health gr
oriented towards the poor, direct approach
sidered risky if not impossible while cont

*A fuller examination of the voluntary h
Chapter 6. The discussion that follo
materials and sources. See also Bang
(1981), Jajoo (1984) and Ramprasad

is seen as a necessary step to establishing credibility. The village health committee which may subsequently be formed is inevitably dominated by high castes, the economically better-off, and males, to the exclusion of those who are most in need of health care.

Frequently, attempts to widen participation follow. Village meetings may be called (even on a regular basis) at which people are asked to identify their problems and make suggestions. In the presence of the dominant minority which demands sophisticated facilities, a hospital or the latest technological advance, the poor majority may refrain from expressing their particular needs or pressing their demands. Ultimately decisions taken by the health service providers generally reflect the opinions and needs of the better-off. The latter may be prevailed upon to accept certain measures such as street-paving and drainage; but mobilising their assistance to bring these improvements to the poorer sections of the village more often than not proves an uphill task. Being higher caste, they are generally not supportive of common latrines; and only the more philanthropic will contribute toward 'common goods,' such as feeding programmes. Neither the rich nor the poor are really interested in health education, the former deeming it a waste of time on the part of health service providers, while the latter cannot utilise its messages anyway.

At the next stage, a local person may be selected to perform some simple health tasks and to liaise with the trained health personnel. (It is this strategy for community participation, evolved in the non-governmental sector, that gave us the national Community Health Workers' (now Health Guides') Scheme, and we shall look at the experience separately). The village committee may be charged with supervising the village health worker and with raising contributions from the community to support the worker and defray other health care costs (eg. that of drugs). A village health fund may be established, with villagers contributing according to income, land-holding or other assets. A not-uncommon procedure is to deny free health care to those who do not contribute, levying fees on them instead. Thus, those who cannot afford regular contributions, i.e. the poorest, are not entitled to the services; if they cannot

afford the fees levied for the services or drugs at the health clinic in emergencies, they do not utilise them. The presence of trained health personnel in the vicinity relegates CHWs to second-class status and even the poor may be reluctant to avail of their help.

As the health group begins to focus more attention on the poor and intensifies personal contact with poorer households, the interest of the village elite begins to wane. Because they are better-off, they have fewer health needs, but they begin to resent the higher contributions they make to the health fund, or the higher fees they pay for services.

Thus, over time, their contributions decline. When the better-off back out of supporting the health programme, it often fails. Alternatively, as Bang (1983) has suggested, in order to forestall such an eventuality, the health programme increasingly focuses its attention on the rich to the detriment of the poor.

There are, of course, examples of health projects which have overcome these problems by expanding representation to include lower castes, tribals, women and so on, by cajoling or pressurising the elite group to pay more heed to the needs of the poor and thus sharing health benefits more widely (Prem, 1980; Roy, 1985). Usually however, voluntary organisations choose to maintain a profile below the level of reckoning with the village power structure, by limiting their objectives to service delivery. Conflict with the power structure is exacerbated if the health group attempts to attack some of the underlying causes of ill health among its clients, such as unemployment and poverty, by undertaking other development activities and by "conscientisation." Such efforts are viewed by the elite as a direct threat to their economic and political positions. Most often such conflicts are 'resolved' by appeals to higher bodies (for example, a recalcitrant panchayat may be set right by a Zilla Parishad to which the project leader has access), and rarely by grassroots manoeuvres (Sethi, 1984).

Perhaps a major lesson to be learned from the experience of the voluntary sector is that universalising health by going beyond service delivery to "awakening people's consciousness" about health and its determinants is a process fraught with conflicts. The resolution of such conflicts requires intense personal efforts and charisma, an ability to focus on crucial

local problems; and programmatic flexibility to adapt to specific field situations. These characteristics are present in some (but not all) non-governmental health agencies. They are difficult, if not impossible, to introduce into government programmes, as we shall see below.

Bringing About Participation : Past Experience

From the foregoing discussion of what constitutes participation and who participates, one can see that the nature and extent of community participation are determined to a great deal by the agency charged with stimulating it, and the processes used to do so. A basic assumption of the call for community participation in health by the government is that cooperation from and among the members of a village community to solve health problems can be stimulated by agents of the governmental health system. This is somewhat reminiscent of the Community Development Programme of the 1950s and 60s in which government functionaries were sent out to promote a better standard of living among rural people by awakening their "natural" tendency to self-help, cooperative decision-making and action (Dey, 1970; Gaikwad, 1981; Madan, 1983).

Despite the decades that have intervened, there are marked similarities between the Primary Health Care and Community Development Programmes, perhaps attesting to the cyclical nature of development "fads." For example, both purport to encourage local initiative rather than impose outside plans, including local determination of priorities, cooperative planning and decision-making between government and people, contributions of labour and other resources, and local participation in the execution of decisions. The strategy of having community leaders carry out the programme, with only technical guidance and general coordination provided by outsiders, is also common to both programmes. Another point of similarity is the requirement for coordination between multiple government agencies (e.g. health, agriculture and education). Although primary health care is entrusted to a single sector in the main, its multi-sectoral objectives require coordination between sectors, just as did the Community Development Programme, which was conceived of as an inter-sectoral effort.

A key assumption in both programmes is that the bureaucracy and community leaders will share power, responsibility and benefits widely with the people. However, one of the most significant lessons of the Community Development era was that this does not happen automatically. Within the bureaucracy, inter-departmental rivalries stymied multi-sectoral action. A lack of cooperation between the bureaucracy and people's institutions slowed vertical flows. At the village level, local leaders, reluctant to share benefits, prevented effective implementation. Thus, the government effort to mobilise people for community development (which included health and nutrition components) was largely a failure.

Since the Community Development era, rural India has experienced considerable infrastructural development, including the growth of Panchayati Raj institutions and cooperative organisations. These were created to act as links between the people and higher level government departments. Numerous development programmes have been channelled through them. The current call for people's participation in health could rest with the participation of such institutions in the delivery of health services. However, a major question would arise out of such a formula : in the matter of health care, will panchayats, mahila mandals, and so on represent and cater to the mass of people (the poor and the needy) or just to the dominant elites? The experience of the voluntary sector, as well as of other development programmes, would seem to show that links between such institutions and "the people" are weak or even missing. If they do not cater to the poor, chanelling health care through them would be pointless because *the major reason for people's participation in health is universal access.*

In contrast to the Community Development Programme's concentration on economic matters and material improvements, community participation in health is aimed against social injustice as the cause of underdevelopment. The objective is largely to increase the demand for social goods and produce equality in access to health. However, in view of rural realities, renewed interest in people's participation must clearly be accompanied by a search for new ways to bring it about.

Current Strategies

A strategy recently developed to bring about community participation in health is the training and deployment of village-level health workers. Modelled on the Chinese barefoot doctor but tried and tested by local voluntary health agencies, the Community Health Worker was introduced on a national scale in 1977 (GOI, 1977). The Scheme itself is participatory and is also intended to bring about wider participation in health activities. The Community Health Worker is a member of the community, selected by the community to provide basic health services "at the doorstep," and accountable to them. The CHW interacts with the formal health system on behalf of the community and is paid a monthly honorarium by the government. The worker is also responsible for motivating the community to identify its specific health problems, organising it to deal with them, and generating the participation of people in health activities.

There are some differences between "community development workers" and "community health workers" which make the latter scheme novel. In the Community Development Programme, the workers came from outside the village and were considered government functionaries. Their mandate was to demonstrate techniques and instruct villagers to change their ways in accordance with centralised decisions. Community health workers, on the other hand, come from within the village, and their main role is conceived as one which draws upon indigenous stores of knowledge, labour and resources.

However, there have been several evaluations—at the micro- and macro-levels—of the CHW Scheme which point out problems with its participatory intentions (Bose *et al.*, 1978; Dandekar and Bhate, 1978; Saksena, 1978; Ghosal and Bhandari, 1979; Maru, 1980; Bose and Desai, 1983; NIHFW, 1978, 1979, 1984). First, although the CHWs are indeed residents of the villages in which they work, the communities at large rarely select them (Vohra *et al.*, 1978; Bhatt *et al.*, 1981). Instead, selection is carried out by village leaders (members of the panchayat) who view the scheme as another opportunity for

nepotism or to hand out political patronage.* Despite the involvement of the health centre doctor, the stipulation that the CHW must be acceptable to all members of the community is often ignored. Thus, frequently, CHWs belong to a particular faction of the village and cater solely or primarily to it, often to the neglect of the poor and the needy. Also, in the past, the majority of CHWs have been men, and, as is culturally prescribed, women and children have largely been excluded from their ambit.**

Second, the CHWs are trained by "outsiders" who have a different value system regarding health practices and therefore attach importance to converting the ways of village people rather than building on indigenous knowledge and ways. The "demonstration approach" is very much a part of the function of CHWs. Much is, therefore, imposed from the outside rather than locally generated.*** There may be essential differences between what is considered desirable by the programme's designers and trainers and "the people" (e.g. small families vs. large families). Even if there is agreement on priority needs, there may be divergences of opinion on the means to achieve certain goals. For example, villagers may not see community latrines as an appropriate means to bring about improved health although these are usually well regarded by health planners. Thus, the CHWs are caught between two fairly disparate sets of expectations.

Third, although the scheme is frequently welcomed by village people who have heretofore felt helpless in dealing with their health problems, their interest focuses on the curative care which CHWs are trained to provide. (Indeed, often,

*Only rarely are there instances of other village organisations (e.g. mahila mandals) being involved in the selection of CHWs or in any other aspect of the Scheme.

**To rectify this problem, the 1981 Joint Councils of Health and Family Welfare recommended that all future CHWs selected be women, so that the pressing tasks of maternal and child health may be seen to (GOI, 1981a)

***Indeed, to the extent that participation in health is rarely perceived as a high priority, even the CHW Scheme is an 'imposition;' and there are instances of friction between CHWs and indigenous practitioners who perceive each other as competitors.

people propose that the worker become a fully qualified doctor!). Although the curative function is intended to be the CHWs "entry point" into the community—to enhance community participation in health action, in fact he rarely progresses beyond it. This is in part due to the fact that the demand for curative care out-strips the time (two or three hours a day) the worker devotes to health work. (The CHWs are only part-time workers who have other economic and/or domestic responsibilities). It is also due to the fact that the overwhelming emphasis in their training is on disease identification and treatment. A perusal of the CHW Manual (MOHFW, 1977) indicates that the CHW is required to educate the people about the prevention of various diseases and about practices that promote good health, to encourage their participation in specific public health tasks, and to refer them to the next level of health service (the Multipurpose Worker) in case of need. However, the CHW is not trained for his role in communicating with, organising, or mobilising the community. Thus, the preventive and promotive tasks which are the crux of primary health care and require collective action remain undone, save a few discrete ones such as well-chlorination or organising children to receive immunisations. The intention to promote people's participation in health through the community health worker therefore is still-born.

Fourth, the CHW is not supported by the community but is paid a small stipend by government. This immediately makes him beholden to the bureaucratic apparatus which processes his payments. Furthermore, to acquire the drugs and supplies to carry out his curative function, the CHW must align himself to health system personnel. In practice, therefore, CHWs behave more like government functionaries than like community members. Significantly, the name of the Scheme was changed in 1980 to Community Health Volunteers' Scheme and again in 1982 to the "Health Guides' Scheme." They are only beholden to their communities in the sense that they maintain their positions at the behest of those who selected them. They are rarely "supervised" by the people, (there are no mechanisms to do so) or encouraged by them, and thus their accountability to the people remains notional. On an ongoing basis, the CHW is evaluated by no one, neither the health system nor the community. In any case they regard their position as 'springboards'

to better paid jobs, just as Community Development workers did before them.

To overcome some of these inadequacies, it was proposed to set up village health committees as part of the revised Health Guides' Scheme in the Sixth Plan period (GOI, 1981a). The intention is to elicit greater community involvement, including that of lower castes and women, and to clarify the relationship between health worker and community. It is, of course, too early to pronounce judgement on this additional strategy, although some possible problems have been alluded to earlier.

Fundamental Problems

From the three sets of experience described in the previous sections—that of non-governmental health agencies, the Community Development Programme, and the Community Health Workers' Scheme—one discerns a gap between the view from the top that community participation is desirable and necessary and grassroot realities in operationalising it. To close this gap one must take cognisance of some fundamental problems that face community participation in health care.

Village Communities are Heterogeneous

To participate effectively in the planning, implementation and evaluation of health services, a community must be a group with a collective capacity to make decisions, to mobilise human, material and financial resources, and to share responsibility for action. However, in national development planning, the term "community" is applied to a group of people contained within a circumscribed geographic area, such as a village or an urban slum. This bureaucratic rendering diverges from socio-cultural reality. It is well known that these groups are extremely heterogeneous, being divided by religion, caste, class and clan. Such stratification inhibits their ability to identify common problems, interests and goals, and to work together as cohesive units. As discussed in the section on 'who participates,' in stratified village societies, the rich are reluctant to share responsibility and benefits with the poor lest they threaten the power structure. Conversely, the poor are reluctant to join hands with the better-off as they feel the latter will corner the benefits (not without

historical justification). The primary commitment of both groups is to family rather than to an amorphous "community." Unless ways are found to achieve community concensus, community action for health will remain a dead issue.

This problem may be considered semantic and the criterion of homogeneity avoided by the use of the term "peoples' participation," implying that the goal of improved health can be achieved through widespread individual participation. However, we must recall that the primary objective of people's participation in health care is to enhance access of the most deprived (the poor, the landless, women and children) to health care. It is *their* participation that is sought above all; but the very factors that have denied them access in the past to health-producing goods and services are likely to prevent their participation in the future, unless these factors are removed.

Health is a Low Priority

Another problem facing participation in health care is the low priority generally accorded to health concerns. The poor family, whose resources (of time, labour, cash or kind) are mostly used up in the tasks of survival, prefer to "participate" in what seem to them more vital areas of economic life. Their participation in programmes can be expected only if these are seen to alleviate poverty. Unfortunately, health programmes are not viewed in this light (because they have not been projected as such). In the normal course, family health care is left to the women of the household whose participation in health programmes is constrained by traditional-social norms, by their double burden of wage-earning and domestic work, and by their lack of information on the benefits of participating (see Chapter 4). Only those health activities which show immediate results are considered relevant; little or no value is attached to preventive health. Health becomes a paramount concern only when disaster strikes a family in the form of major illness (primarily that of the main wage-earner). Although the poor have limited financial resources to spend on private, curative treatment, the concept of 'insurance' against ill-health does not exist, and indebtedness is a frequent consequence of illness.

Even if the better-off can "afford" to participate in health care, they are less in need of primary health services because

they have greater access to health-producing goods, to the services of local private practitioners, or to urban hospitals in time of need. They too prefer to participate in programmes that bring economic gains and can be induced to participate in health care only if gains in power and prestige are associated with the programme. Thus, they also accord primary health care a low priority.

Self-reliance is Difficult—If not Impossible

The terms "self-reliance" and "self care" refer to the ability of individuals or communities to establish and sustain a system which ensures health, relying on their own resources (Werner, 1977). They have emerged as a reaction against people's dependence on centralised and professionalised health services which are inaccessible, unreliable and culturally unacceptable.

However, there are both historical and pragmatic impediments to their achievement. For the maintenance and improvement of health, village people need access to four broad kinds of resources : knowledge, technology, manpower and finances. However, traditional knowledge is not fully equipped to deal with the prevailing disease pattern, as the persistence of high morbidity and mortality in the country attests. It may not be equipped at all to deal with the new diseases—such as the widespread chronic malnutrition which has replaced the acute starvation of famine, but is frequently not recognised as a preventable and treatable condition. With the advent of modern medicine and other forms of 'modernisation,' rural people's access to traditional practices and practitioners has itself declined. For example, changes in family structures have often cut mothers off from grandmotherly sources of advice on child health care. As the competitive cash economy has replaced the cooperative *jajmani* system and enveloped traditional medicine men, access of the poor to them has diminished. Among the poor who have scarce resources, the gap between knowledge and practice may be wide. Furthermore, a psychological climate has been created over the years of public health service expansion (even in remote villages) which places value on what elites have and use—the paraphernalia of curative allopathic medicine (drugs, diagnostic equipment, injections). In the face of this demand, strategies

which emphasise indigenous knowledge and technology alone will not be readily accepted.

The mandate to utilise available community resources of manpower and finance arises from the belief that free or charity services provided by 'outsiders' have increased dependency. The Alma Ata Declaration calls for services to be provided "at a cost the community can afford" (WHO-UNICEF, 1978). However, poor communities have severely limited resources which are inherently maldistributed. Although it is desirable to promote people's participation to enhance the cost-effectiveness of health programmes by ensuring their relevance, acceptability, utilisation and continuity, it is clearly unrealistic to expect poor communities to manage health care (however low-cost) entirely with their own resources. This "myth of self-sufficiency" has been explored—and exploded—by the voluntary health sector (see Chapter 6). There are major reasons why 'external' assistance is needed for health efforts at the village-level. For one, if people's knowledge and the effectiveness of traditional practices are limited, as discussed above, there is need for at least para-professional if not professional manpower to provide health care to those who are ill. Before people can participate in decision-making for and controlling health programmes, they must have access to knowledge about health and to health services. For another, besides individual, family and community action to prevent disease, concerted attacks on the environmental causes of ill-health are required, for which improvements in water-supply, sanitation and nutrition need to be undertaken. These call for both external manpower and finance.

Professional Commitment is Lacking

A reason often given for the inadequate functioning of the CHW Scheme is the lack of commitment—even opposition—to the Scheme by the medical profession. As illustration, the scheme was called "a package of absurdity" and "a cruel joke" by the Indian Medical Association, and the CHWs referred to as "quacks let loose on unsuspecting masses." In the field, doctors are disillusioned with the Scheme and want the CHWs, including their selection and its criteria (such as educational level), to be under their technical and administrative control (see, for example, Maru, 1980). This problem of professional

antipathy beleaguers community participation in general. In a system that has become professionally "mystified" and rigidly hierarchical, the idea of decentralising function is anathema. Medical personnel do not perceive a useful role for people's participation in the provision of health care and, indeed, see a contradiction between community participation and their own role in providing health services. Para-professionals, too, feel threatened by the CHW Scheme, as do local traditional or allopathic practitioners. By opposing it, these groups succeed in undermining the people's confidence in it.

A Double Standard Prevails

This antipathy to community participation is part of the larger lack of professional commitment to rural health care. Because trained health professionals do not wish to serve in rural areas, "acceptable," "community-oriented" persons, who can be trained to handle 80 to 90 per cent of health problems, are sought to fill the gap in health services at the village level. These semi-literate village people are expected to perform service, education and motivation tasks that even the most dedicated professionals would find difficult. Thus, professional and bureaucratic responsibilities are devolved on powerless and poverty-stricken individuals under the guise of peoples' participation.

Again, although CHWs' services are not supposed to be second class, the Scheme is acclaimed as the low-cost solution to rural health care. CHWs are expected to perform their tasks virtually free, although it is important and essential work. A "service motivation" is considered paramount for them, while their role-models, doctors, are better remunerated to provide remote, curative services. More women are expected to undertake this low-paid work at the same time as "women's status" is sought to be enhanced! The assumption that participation in health work confers prestige and status on the community health worker is highly questionable in our socio-economic and political context.

Thus, while community participation is intended to encourage people to recognise and realise their own potential to maintain and improve health, there may be a fine line between urging people to take an interest in their health and perform

basic health tasks, and viewing "people's responsibility" as a means of obviating the necessity for action on the part of the government machinery. The corollary to individual or community responsibility for health is individual or community blame for illness. In the context of existing social and economic inequalities, and their profound influence on health, this is both morally indefensible and, in the long run, disastrous for the nation. Under these circumstances, the poor health conditions of rural areas will persist, and "people's health in people's hands" will became an alibi for the system's continued non-performance.

Needs or 'Preconditions'

From the foregoing discussion of conceptual and pragmatic problems facing community participation in health care, one can identify at least three major 'preconditions' for its meaningful and effective achievement. Aristotle, too, cautioned that although productive participation in the affairs of state enhances the quality of life in a society, it depends on the prior existence of certain conditions within it. Sociologists currently distinguish between "autonomous" and "mobilised" participation, and suggest that a greater degree of societal development is required for the former (Pai Panandiker *et al.*, 1983). Under prevailing socio-economic and political-bureaucratic conditions in India, it is unlikely that participation in health care will occur naturally (i.e. autonomously). Although community mobilisation and initiative may be so finely interdigitated that it is sometimes difficult to discern where one ends and the other begins, in the near term, community participation in health will need to be mobilised—through better community organisation, mass health education, and improved health service delivery.

The first need is to create "community" identities in populations of individuals with widely differing status, aspirations and requirements. 'Points of convergence' must exist through which common health goals can be enunciated and promoted. The non-governmental sector has frequently used village social organisations to do this, first exerting pressure on them to widen representation. The community must see the health *of* all as inter-related and view health *for* all as their joint concern. Thus,

community organisations which can enhance participation particularly of the poor in health care need to be fostered. Rural development bodies which promote upliftment of the poor must be encouraged. For this, national commitment to people's participation must extend to fields other than health, and a general climate of widespread local involvement in development programmes be created. A comprehensive policy for people's participation in development as a whole would be more conducive to participation in health programmes.

The second need is to increase public awareness of health problems and possibilities. While it is expected that community participation will lead to greater access among people to knowledge, a great deal of information has to be imparted to communities in order to bring about participation in health. Mobilisation for health action will not occur until people cease to equate health only with drugs and hospitals, and until the psychological dependence on curative services is lessened by the realisation that individuals, families and communities can *prevent* illness. To instill a readiness to change existing health perceptions, practices and conditions, mass health education is called for. Such education must be aimed at *all* people and at promoting major health goals.

To illustrate the point, one important reason for the ineffectiveness of the Community Health Workers' Scheme has been the lack of public health education about it. Although the initial specification—selection of a worker by the community—is interpreted as participation, this is "mobilised" by outsiders (health system personnel). Further involvement, which is supposed to occur "autonomously," has not been achieved; and the objectives of the Scheme have been hampered by the lack of wider participation in it. Although the CHWs role in educating the people and mobilising their support for health activites is of paramount importance, people's acceptance of the workers and use of the services provided by them should have been encouraged independently at the outset. For this, other 'health education' mechanisms, such as the mass media, including radio, television, films, posters, which have thus far remained underutilised, could have been employed. Community organisations and village meetings at which different

groups of the village are represented could also be utilised. For the longer term, health education in schools should be oriented to primary health concerns.

At the present time, the health system has a major role in expanding public health education, including information about available health services. While the ultimate goal of both health education and of community organisation may be to enable communities to plan and design services to meet their needs, and to implement those plans using their own workers and such resources as can be mobilised locally, the more immediate need is to get people to perceive and articulate their health problems and priorities, and to demand both primary care and referral health services. Unless specifically stimulated by the spread of information about health problems and services, this demand side, which has remained dormant due to social, economic, political and bureaucratic constraints, will remain underdeveloped.

Of course, demand and supply are linked in a two-way fashion: if demand is created, health services must be in a position to meet it; and if the supply of health services addresses people's specific needs, they are more likely to demand—accept and utilise them. Thus, health education must be accompanied by appropriate health services to enhance public credibility in the health system, including the CHW Scheme, and to be effective in improving health.

The third major 'precondition' for meaningful people's participation in health care, then, is the efficient delivery of the health services that people need and want (and will demand more of when they begin to 'participate'). It is not enough to encourage communities to provide basic health services for themselves and to create demand for higher-level services. It is essential to have a supply line that meets demand at the appropriate level, ensuring that it is not frustrated. The institutions charged with delivering health services thus have a responsibility to reorganise in accordance with actual health needs and priorities and reorient themselves to a participatory form of health care. The disjunction between people's demand for curative services and primary health care's orientation to preventive health will only be resolved when curative care is ensured for those in need.

Indeed, the quest for people's participation in health has

emanated from a desire to make health services more relevant and acceptable to people by addressing their "felt needs." Thus, the health structure must be able to gauge these needs and respond to them. This ability has been one of the major strengths of non-governmental agencies. The governmental system must similarly find ways of formulating its programme content according to local needs and priorities. Better knowledge and understanding of local-level problems is required. Information must flow from periphery to centre, while resources flow in the opposite direction. To implement appropriate health services at every level, decentralised planning is required. Organisation and managerial skills are essential for independent decision-making and evaluation at lower levels of the health system (e.g. the block level). In addition, certain mechanisms which have become integral parts of centripetal health programmes need to be reassessed and changed, if decessary. For example, inflexible worker-to-service population ratios and targets deny the flexibility that is required to 'fit' a health programme to a community, and in turn may kill community initiative.

To bring about these changes, a much greater level of bureaucratic and professional commitment to primary health care is the most important requirement. Both "debureaucratisation" and "deprofessionalisation" will be involved. For the delivery of basic health care at the village level, the health system must "demystify" basic health functions. Doctors must share their knowledge by properly training village health workers to serve a population in accordance with its needs. Community health workers need quality training in prevention, diagnosis, treatment and follow-up (and not just the pastiche training that is currently imparted). In addition to creating a well-trained cadre of Community Health Workers, the performance of the health system in terms of providing CHWs with supplies, supportive supervision, and refresher training needs improvement. The question of appropriate remuneration for CHWs—whether by government or community—needs to be faced squarely.

In summary, before community participation in health can be brought about, there is a need to increase people's awareness, to train workers, to ensure logistic support and information

to the workers and to the community, to train people for decision-making and management of participatory organisations, to reorient bureaucratic practices and procedures, and so on. Thus, bringing about community participation will take time and effort and require money. Although community participation may lead to low-cost health care in the long-run, in the short term it entails an increase in the budget for rural health. Rural health has consistenly captured only a very small percentage of the national health budget, the major portion going to sophisticated and specialist facilities in urban areas (see Chapter 9). A premature search for low-cost solutions to ill-health in rural areas, while "pragmatic," will only perpetuate —rather than rectify—this skewed distribution of resources. The purpose of involving people in their own health care is not simply to legitimise past policies and practices, or to curb dissatisfaction with the health system's failure to meet expectations but to actually improve their health.

CHAPTER 6

THE ROLE OF THE PRIVATE VOLUNTARY HEALTH SECTOR

New jargon frequently creeps into the parlance of policy-making at critical junctures, and is apt to confuse. "Privatisation" is one such expression in the health sector today. What is meant by it? What are the aims of such a strategy? Whom and what does it involve? How is it to be set about? What criteria may be used to judge whether it has been 'operationalised' or results achieved? Although the National Health Policy Statement (GOI, 1982a) invokes the private sector on several counts, there are no readily available answers to these questions. In this chapter, therefore, I intend to review the basis of such a strategy and ask, simply, what is desirable in connection with national health objectives, and what is possible?

The Strategy of "Privatisation"

The Policy Statement, it will be recalled, espouses a decentralised, participatory mode of health development. Besides calling for the "organised involvement and participation of the community" (see Chapter 5), the planning and implementation of primary health care is seen to depend on paramedical extension workers reaching out from health centres, linking up with agents in and efforts at the periphery. Among these efforts are included the large number of private voluntary organisations working

in the field of health throughout the country. The Policy Statement suggests that the services being rendered by these private voluntary health agencies should be adequately "utilised" by the government in the provision of universal primary health care. In addition, the government is to encourage new voluntary efforts in the cause of health for rural and urban slum areas. It is envisioned that voluntary agencies' "services and support would require to be utilised and intermeshed with the governmental efforts, in an integrated manner." Analogously, the services of private indigenous practitioners are also to be "integrated" in the overall health delivery system for "preventive, promotive and public health objectives," but those of private allopathic practitioners have been excluded from this intention.

Besides joining hands with the private sector for primary health care, the government also wishes to increase investment by private agencies in curative medical centres, particularly in "speciality" and "super-speciality" facilities, to ensure that they are adequately available within the country. The avowed intention here is to reduce government spending on these, so that more monies become available for basic health services and existing government curative facilities are eventually used to treat the needy. To achieve this, it is proposed that the government offer logistic, financial and technical support to the private medical sector.

Thus, in a spirit of "privatisation," the government is devolving on the private sector some responsibilities which have been its purview to date. The several modalities enunciated pay due heed to the plurality of the private health sector : the private voluntary sector is to participate in the extension of primary health care while private commercial interests invest in curative and speciality facilities. In this way, a more focused role seems to be envisioned for the government in the provision of health services. If the health sector is viewed as a conventional pyramidal structure, government services would be limited to the intermediate levels, while private agencies occupy the top and bottom of the pyramid. Their situation implies that both community-based voluntary agencies and sophisticated urban medical organisations will have 'interfaces' with the government health system. It is the nature of these interfaces—

"private-public" or "government-NGO" collaboration—that is of immediate interest in the strategy "privatisation."

The Private Health Sector

A 'dual health economy'—both private and public investment in the health sector—already existed in pre-Independence India where the colonial government provided health facilities in military and European civilian "enclaves" (Ramasubban, 1982), while the rest of the population depended on private practitioners for its health care. However, the scope of government health services expanded greatly after 1952, so that today government agencies provide a large proportion of available health services. While private practitioners and facilities have increased in number, their importance is largely confined to urban areas, the public system tending to predominate in terms of allopathic health care in rural areas. Government health statistics show that in 1983, 43.8 per cent (or 3022) of the 6901 hospitals in the country were owned by private agencies, while 50.7 per cent (3500) were government-owned and 5.5 per cent (379) were owned by local bodies (CBHI, 1983). The proportion of hospital beds owned by the private sector was even lower at 27.6 per cent of the total, while the government owned 67.7 per cent. The rural-urban distribution of these facilities is highly skewed with only 26.9 per cent of hospitals and 13.5 per cent of beds being in rural areas. While breakdowns by private and public ownership are not available separately for rural and urban facilities, one can look at the ownership of dispensaries, which are mostly (68.7 per cent of the total) located in rural areas : the private sector runs only 14.4 per cent of the dispensaries in the country. Furthermore, while government facilities are distributed widely throughout the country, there appear to be many areas in which private health organisations do not function, or function only in a limited way. Although one should perhaps accept these government figures with caution—also because the collation of information of this nature is fraught with difficulty—they confirm the lesser role of the private sector in rural allopathic health care. However, although the number of rural hospitals and dispensaries owned by private agencies may be small, there are also a large number of "other

institutions" in the voluntary health sector (VHAI, 1981), suggesting that its strength may be not in size but in the nature of its activity.

The Government's Interest

Despite the history of private sector involvement in health, governmental interest in private health organisations is of recent origin. In the mid-1970s new understandings of the inter-relationship of morbidity, mortality and fertility and acknowledgement of the need to improve the performance of governmental health services led to the search for "alternative approaches to health care." A few private health efforts began to attract attention because they appeared to be succeeding in bringing about 'micro-demographic transitions' in their target areas. In 1976, a symposium was held under the joint auspices of the Indian Council of Medical Research (ICMR) and the Indian Council of Social Science Research (ICSSR) to review some significant on-going projects (ICMR-ICSSR, 1977). By 1980, when the ICMR hosted another conference—this time to review "evaluation" strategies for Primary Health Care, the number of "significant" voluntary sector projects was doubled (ICMR, 1980). These events signalled a change in governmental perceptions of voluntary organisations as strictly private entities to participants in the national health effort to provide universal health care.

Indeed, by this time, the government had already imbibed something of the efforts of the voluntary sector by introducing the Community Health Workers' Scheme at the national level in 1977. Although recommendations for a cadre of village-based health workers go back to the Bhore Committee (GOI, 1946) and were reiterated by the Srivastava Committee (GOI, 1975), the implementation of the proposal owes much to the experience of voluntary health projects such as those at Kasa, Jamkhed, and Miraj in Maharashtra (ICMR-ICSSR, 1977; ICMR, 1980).

Thus, even though collectively, private voluntary health programmes have had little impact on aggregate health statistics, the success of their "action-demonstrations" has affected policy-making. Health policy *vis-à-vis* the private sector has

evolved rapidly in the past decade from advocating the inclusion of some specific modalities such as Community Health Workers, to the more general strategy of "privatisation." This strategy is a turn-about from the 1940 resolution of the National Planning Committee which called for an integrated (curative and preventive) system of health organisation which "can be worked only under state control." In its Interim Report (which foreshadowed the Bhore Committee's), the Sub-committee on Health of the NPC recommended that "the preservation and maintenance of the health of the people should be the responsibility of the state" (NPC, 1940). Instead, the National Health Policy advocates "rehabilitating the role and importance of voluntary health actions at all levels and voluntary organisations *vis-à-vis* the government's role and responsibility in this area. The policy envisages a very constructive and supportive relationship between the public and private sectors in the area of health by providing a corrective to re-establish the position of the private health sector" (Ministry of Health and Family Welfare, 1985).

However, the proposal for "privatisation" can be viewed in a number of ways. At its most straightforward, it can signify the government's desire to expand private enterprise in all spheres of health in order to increase people's access to health care. By the absorption of private agencies and personnel in state policy and programmes, the 'joint' health sector may receive a fillip so that it becomes bigger, more varied and more effective. The inclusion of indigenous practitioners in the strategy suggests that no 'systems' are barred in the effort to expand health coverage, although the exclusion of private allopathic practitioners is puzzling in this regard. In any case, the scenario is one of "a hundred flowers blooming," albeit at the periphery of governmental health services.

At this level, "privatisation" may be part of a strategy for decentralisation, necessary to achieve better results in health, just as in other development sectors such as agriculture or education. Within the standard governmental approach of policy-making and planning at the Centre and service delivery at the 'grassroots,' with privatisation the implementation of programmes at the local-level would simply be entrusted to voluntary organisations. This may help to circumvent a major

problem encountered in governmental efforts to decentralise : the reluctance of State-level leaders to devolve power on the district, block and village levels. The locus of conflict is shifted from Centre-State or State-District, etc. to voluntary agency-state relations.

In this view of "privatisation," the desire of government to involve voluntary agencies in national health development can be seen to stem from its admitted inability to meet policy and planning objectives and targets, and to implement programmes with the desired characteristics (e.g. community participation) or coverage (e.g. in remote areas where government doctors will not go). The decentralised and socially-committed nature of the voluntary sector, and its superior ability to organise people compared with bureaucratic structures are given as reasons for privatisation. Beyond such expedience, the States' desire to encourage wider democratic participation for social progress may be cited. In this context, the government perhaps views itself as providing 'legal sanction' and 'back up' to the voluntary sector to fulfil its mandate to spearhead social change.

A second less-favourable interpretation of privatisation, which finds currency in radical analyses of the government's courtship of voluntary agencies (e.g. Sethi, 1984), is that privatisation is a strategy to coopt the voluntary sector in order to quell shouts about bureaucratic inefficiency, corruption, and so on, and to dilute threats to existing power structures. In this view, the provision of funds and/or technical assistance to voluntary agencies, the placement of private sector leaders on governmental committees or giving consultancies to them, are considered tactics of defusion. Although the government appears to be "decentralising," the cooptation view holds that the devolution of responsibility on the voluntary sector is nominal rather than real.

It becomes real in a third possible interpretation of 'privatisation' in which the term is taken to be akin to 'denationalisation.' Although devolution may be gradual, the government may hope eventually to turn over the provision of health care entirely to the private sector. This aspiration may stem from the realisation that, despite the immense resources the State has sunk into health services over the past 35 years, it still fails to reach the majority of people. In contrast, the "success" of the

private sector is invoked. The corollary of 'denationalisation' is greater "privatisation of the state," that is, increasing reservation of government health services for 'the few,' so that ultimately public services are made private. Which of these interpretations of the strategy of privatisation is 'desirable'? What is possible? To resolve these questions, the nature of the voluntary health sector, its activities, strengths and weaknesses must be examined.

Voluntary Health Agencies : Genesis and Being*

'Charity,' 'development' and 'empowerment' largely sum up the motivation of voluntary agencies in general, and are the basis of their classification into three distinct types : (a) disaster-relief or charity ones, (b) the development-oriented organisations, and (c) political-activist groups (Sethi, 1978). The first group is viewed as "ameliorative" and "altruistic," while the second is seen as having a more "technical" or "professional" approach to improving the productivity of the poor. The third aims to bring about structural change by "conscientising" poor people to fight against exploitation, organising and mobilising them.

The majority of voluntary health organisations fall into the first or second of these categories, few of them having entered the third arena. Examples of those in the charity-oriented group are Arya Samaj dispensaries, Christian Mission hospitals and relief agencies, and the like. The second category, though smaller, is varied, consisting of efforts emanating from both religious and secular institutions, including hospitals and medical colleges, business houses, and so on. Because of the 'professionalised' nature of health care the distinction between

*The observations and judgements made here and in subsequent sections are based on personal field visits to numerous voluntary health agencies in the country (and a few in other developing countries), on discussions held with agencies' staff and others interested in the voluntary health sector, on material presented at several conferences and workshops on the subject of voluntary health action and its interface with government, and on extensive reading of available reports, descriptions and studies of voluntary health agencies, besides referenced articles. A list of agencies is given in Annexure A along with the major modes of study adopted for each agency.

the two groups may be unclear. The former group may be taken to consist of agencies primarily concerned with supplying health services though not always as 'charity' or free services, while the latter encompasses efforts that also undertake other 'development' activities for the improvement of conditions underlying health. These latter agencies exemplify the "new health praxis" in the voluntary health sector.

Few agencies which start out to deliver health services indulge directly in political activism, although some may organise people specifically for health and development work. The reason for this may lie partly in the reluctance of medical professionals to "meddle" in politics. The third category, then, consists more commonly of radical groups who began with political organisation (for example, of tribals, harijans, workers, or women), but came to a realisation that health was an important concern of their target group and so started health activities.

It is however important to recognise the chameleon-like character of voluntary health action. Many organisations undertake a mix of activities which make them hybirds of the three "types." For example, while the 'normal' work of an agency may be developmental, in the event of a disaster it may turn into a relief organisation. At some other juncture it may undertake political activity, for example mobilising public opinion or protest against a Bill or Act under consideration. A certain amount of 'non-threatening' political action may be part of the normal activity of 'health and development' agencies. For example, these groups often need to pressurise local government bodies to act in favour of their clients, and at the same time activate the latter to demand services from the State. A few groups function as "watchdogs" to ensure that the government fulfils its commitment to provide certain services and to protect the rights of citizens to these services.

The 'typology' of voluntary agencies is of interest because the question, 'What type of agency does the government envision as a collaborator in the national health development effort?' is central to the issue of privatisation. To date, the tendency in government has been to view all non-governmental agencies in the same mould at a given point in time, rather than to recognise their heterogeneity and consider it in the 'design'

of collaborative measures. Collaboration may not be possible with all types of voluntary agencies, or may need to take on different forms with the different types. The heterogeneity of voluntary health agencies is even greater when one begins to consider other 'modes of differentiation' among them, besides the typology based on orientation (or ideology?), discussed above. Vast differences exist among voluntary agencies' objectives, approaches, programmes, services, methods of operation, 'styles,' leadership, coverage, resources and so on (Table 5.1), which are important determinants of their potential to contribute to national health.

TABLE 5.1

Modes of Differentiation of Voluntary Health Agencies

1. *By objectives*:
   - (a) provide services only.
   - (b) reduce recidivism and attendance at clinics.
   - (c) reduce morbidity/mortality/fertility etc.
   - (d) research and/or training.
   - (e) "evolve a model" for any of the above.
2. *By "target" groups*:
   - (a) clinic-attenders only.
   - (b) poor and vulnerable groups e.g. women and children.
   - (c) specific disease sufferers.
   - (d) whole communities, etc.
3. *By mode of health-service delivery*:
   - (a) clinic-based only.
   - (b) clinic plus mobile teams.
   - (c) central facility plus sub-centres or community-level workers.
   - (d) centre, sub-centres and community-based workers—services "at the doorstep."
4. *By "linkages:"*
   - (a) wholly private services (hospital with or without outreach, or community health agency).
   - (b) linked with other private or public facility as referral point, VO provides "extension" services.
   - (c) train, utilise or manage government personnel and facilities.

(d) to other service institutions.
(e) to other similar VOs.

5. *By services provided* :

(a) specific services e.g. specific disease detection, treatment and prevention; immunisation, nutritional supplementation or education.
(b) MCH and/or family planning.
(c) child care and development, "under-fives' clinics."
(d) comprehensive health programmes.
(e) health and development activities.

6. *By funding source(s)*

(a) fees-for-service (graduated, partial, etc.)
(b) local contributions and other indigenous 'donations.'
(c) government grants-in-aid (Central or State).
(d) foreign donors (governmental, non-governmental including religious and individual donation).
(e) support from multiple sources.

Heterogeneity of Voluntary Health Agencies

Voluntary health organisations tend to exist in the 'gaps' created between the need for health care and a lack of it. They are usually started by "outside agents," often a committed and charismatic individual or group of persons. They are characterised by a concentration on a defined area and population, sometimes by a concern for a specific health problem (e.g. leprosy, blindness, etc.) or problems, and or a focus on the poor.

Differentiation by Objectives and Target Groups

However, they have vastly differing objectives. The most usual statement of intent, particularly of hospital-based programmes, is "to provide services" beneficial to the target group. Where outreach schemes emanate from a hospital into its 'catchment areas'—the objectives may be to reduce loads on out patient departments, to cut down recidivism rates, to follow-up patients, to control epidemics, or to increase numbers of specific services rendered (such as immunisations or sterilisations). Thus, such programmes may include preventive measures and health education. Community-based health programmes state their

objectives as the reduction of morbidity (or of a specific disease), of mortality (often, specifically, infant, child and maternal mortality), and of fertility. While an occasional project report gives precisely-worded, target-oriented statements of these ultimate objectives (e.g. "reduction of infant mortality by 50 per cent (or "to 60 per 1000") by the year 1990," etc.), more common are global statements without time-bound goals. Where preventive and promotive measures are employed their objectives are generally stated as "to bring about change in the community's attitude to health and nutrition" or "to improve health practices and behaviour." Projects which include socio-economic development work aim "to increase the per capita income of the community"—without usually stating by how much or by when—or simply "to improve the quality of life of the community."

Obviously, different objectives imply different target groups. These range from 'clinic-presenters only' to 'whole communities,' with intermediate conformations such as 'women and children,' 'poor and vulnerable groups,' or those afflicted with a specific disease.

Some voluntary health projects, especially those begun by medical colleges, have training and research objectives presiding over their service functions. Usually, the purpose is to provide field training for medical students, post-graduates, nurses or paramedics and research opportunities for post-graduate staff. Almost always service, training and research activities remain independent of one another. Such porgrammes are labelled "action-demonstrations." Experimentation and innovation are part of their ambit, and the evolution of a "model" (health service delivery) programme is an occasionally-stated objective.

Differentiation by Organisation and 'Linkages

Different forms of organisation evolve among voluntary agencies in response to their concern with effective health service delivery. Beyond the clinic-based mode, extension work may be undertaken through mobile teams, sub-centres or personnel deployed in the field. Community-based health programmes may deliver services at central points in villages or in an area or "at the doorstep." A common feature emanating from practical and resource considerations has been the use of persons resident

in villages (who are not health professionals) to deliver services. The 'gap' that voluntary agencies attempt to fill is perceived as both a cultural and an infrastructural one and so the training of local people for health care is appropriate. Usually, Community Health Workers are required to deliver services to each household. In this way, attendance at a sub-centre or clinic located at a central point, where paramedics or doctors are deployed, is required of clients only for 'mass-services' such as immunisation or nutritional feeding, and procedures requiring clinical expertise (such as IUD insertions).

The Community Health Workers usually operate autonomously, without day to day supervision, although the modalities adopted by different agencies differ considerably. Among the most difficult tasks admittedly encountered by voluntary health programmes are the recruitment and training of village workers, the provision of supervision, and coordination with other health workers. Insufficient attention to these issues has often limited the impact of a community health programme, despite the increased coverage that is effected through the modality of a village-based worker.

Differences in the internal organisation of a voluntary health programme also depend on and determine the agency's linkages with other institutions. Many organisations remain wholly independent, leaving it up to clients to connect with other service bodies if need be. Other agencies running 'basic' health programmes may link up with more sophisticated medical institutions—private or public—to obtain speciality services or for referral purposes. In some instances, the voluntary organisation is the 'extension' agency, obtaining and channelling services to the target population, or undertaking specific tasks such as training or research for the parent institution. The presence or absence of such linkages may be a critical factor to an agency's potential to collaborate with the government.

Differentiation by Service Provided

Clearly, the mode of organisation adopted by an agency and its linkages are related to the services it provides. However, a common pattern of service-delivery is encountered among community health efforts, the exact details being defined largely by the resources available. Almost all voluntary health agencies

endeavour first to provide low-cost (or free) curative care including emergency care and treatment of diseases prevalent in the area. (Cases requiring sophisticated medical attention are usually referred to a 'link' institution). Beyond this, they turn to preventive and promotive health care, providing immunisation, nutritional screening and (often) supplementation, maternal and child care and family planning, health education, and environmental sanitation measures.

In addition to health services, 'health and development' groups undertake some of a variety of development activities. They may begin with kitchen-gardening as a strategy for improving nutrition, but go beyond this to agricultural extension work, animal husbandry schemes, or even land, water and energy development. Another range of activities includes non-formal adult education (particularly for women), vocational training, and 'cottage-based' (non-farm) income-generating schemes. Associated with these efforts may be the development of community organisations (such as Mahila Mandals, Youth Clubs or Farmers' Clubs), the institution of facilities such as creches, and schemes for loans, marketing and the acquisition of commercial skills.

These modes of differentiation are by no means exhaustive. They are simply intended to illustrate the heterogeneity of agencies at the 'base' of the health service pyramid. A very wide range of voluntary health action exists in the country. Beginning with different 'entry points,' a wide focus emerges in the work of voluntary health agencies. Each agency is today making its own particular contribution to national health. Any strategy of privatisation, therefore, would require a variety of means of 'interfacing' with government.

Ingredients of Success in the Voluntary Health Sector

The potential for 'privatisation' or for collaboration between the government and voluntary sectors will be delimited by the strengths and weaknesses of both. Voluntary health agencies are considered to have succeeded where government structures have failed. What have been the ingredients of this "success"? What have been the 'stress points'?

Flexibility and Dynamism

The "flexibility" of voluntary health organisations is manifest in their varying programme strategies. Less encumbered by structural hierarchy and procedural webs than the governmental health system, their activity mixes can be changed to suit local conditions or emerging crises, and to eliminate outmoded techniques and methods. Their ability to respond to changing situations—"dynamism"—is demonstrated by their chameleon-like nature. Thus, the voluntary sector can indeed be a vehicle of change—among its clients as well as within the context of national health care, provided it rises to the challenges inherent in 'flexible' action such as clear vision, prioritisation, "management by objectives" and a commensurate enlargement of organisational capability.

'Local adaptability' is also part of the ethos of voluntary agencies. The physical position of voluntary agencies close to the 'grassroots' permits them to respond to people's desire for change. However, while health agencies may view themselves as co-partners in an indigenous process of change and wish to promote strategies which are based on specific local dimensions of a problem, they have not done this unequivocally. For example, most have imposed external values by 'importing' and propagating allopathic medicine, rather than working through or with indigenous practitioners. In fact, few projects involve traditional practitioners at all, except for *dais*—and even the approach to these is one of 'conversion' to modern medicine.

Dedicated Leadership

Because dedicated programme managers are the *sine qua non* of private voluntary health projects, the foremost explanatory theory of their success is the "dynamic leader theory." In the health sector, leaders are almost invariably middle-class, medical professionals guided by their concern for people who do not have access to the formal medical system.

The committed leadership factor may, however, pose problems in the search for the 'added significance' of voluntary agencies to the national health effort. The problems relate both to current management of voluntary agencies and to the issue of "succession."

The majority of voluntary health project leaders tend to assume responsibility for all programme decisions rarely delegating authority within their organisations, leave alone availing of expertise beyond their agencies. While continuity of direction may be ensured as long as the committed leader is around, continuity of leadership is far more difficult. The centralisation of power invariably means that projects fold up when the individual moves on, as has happened in a number of voluntary health efforts. To date, the issue of second-line leadership remains a critical problem facing (but rarely faced by) voluntary health agencies almost without exception. If privatisation or collaboration is envisioned between a voluntary agency and the government it would be essential to ensure that the committed leader begets committed and competent followers.

"Professionalism"

Although the terms 'voluntary' and 'professional' may appear contradictory, in the health sector voluntary efforts have long utilised trained professionals, such as doctors and nurses. The "trend to professionalisation" in the voluntary health sector today thus refers to the use of expertise in 'allied' areas such as management, communications, social sciences, rural development, marketing, and so on. Voluntary efforts are increasingly being "systematised," in part out of necessity (because of shortages of funds) and in part out of concern for the long-term survival of projects. Sustained development is equated with a professional approach.

This trend also arises from the increase in numbers of professionals seeking "alternative forms of employment in reaction against hierarchical, inefficient, or corrupt structures. Urban living and institutional careers are no longer regarded as irrecusable. Although young professionals in the voluntary sector may work at rates below their 'market value,' ' voluntary' no longer means "unpaid." Most draw salaries and receive other perquisites such as housing, school fees, medical costs, travel allowances, and/or are able to write off various expenses against project funds. Many admit that the 'quality of life' in their project 'enclaves' and the satisfaction they get from their work far outweigh any hardships they may suffer.

However, voluntary agencies have a great deal of difficulty

keeping effective personnel in place and consequent high turnovers of staff. Although this is sometimes ascribed to the personality or ideological conflicts that arise among members of voluntary groups (particularly when authority is centralised as described above) it may also stem from a basic contradiction between the need for technical-professional people in voluntary action and the fact that "flexible" programmes require flexible staff. Frustration often sets in among professionals because job descriptions are vague or changeable, and upward mobility non-existent. Thus, the major question facing voluntary agencies in this regard is whether 'professionalism' and social commitment can be combined in an adequate number of cases.

Intensive Management

"Intensive management" is another factor that has apparently contributed to voluntary agency success. After surveying seven health agencies in Maharashtra, Pyle (1981) identified several management strategies employed by them. They were credited with having a "results-orientation" rather than a 'procedures domination' (Korten, 1980), emanating from clearly-defined objectives and specified goals and targets. They had a "target-group focus," and "prioritised" the needs of their target communities. Programme components were introduced to meet these needs in a phased fashion. "Flexibility" and "local adaptation," "community participation," "decentralisation" and "local involvement" were also aspects of their management strategies.

There is little doubt that a number of health agencies utilise these tactics and owe to them a great deal of their effectiveness. However, the extent in which such strategies have been 'systematised' may be doubted. Retrospective investigations into voluntary agency functioning paint the process as organised and somewhat linear in its evolution because any stray paths travelled can be downplayed. Prospective inquiries do not reveal the same degree of managerial vision, and day-to-day happenings appear more 'ad hoc' than "intensive management" implies. In fact, if 'flexibility' is a strength of voluntary action, clearly laid out management strategies would seem to be somewhat antithetical. Further, the absence of data bases, discussed below, would make 'management by objectives' impossible.

A workshop convened to identify specific management problems faced by voluntary health organisations identified several (Maru *et al.*, 1983). Among "strategic issues" were the "preservation of uniqueness," expansion, succession of leadership, and development of interlinkages between agencies. Resource-related issues included manpower planning and development (including in-service training), 'team-work' management, financial systems, and cost-effectiveness measurement. Operationalisation of certain values such as participation and evaluation of health projects were the 'project-related' issues discussed. However, a conflict was perceived by voluntary sector participants to exist between "project management" and "the project's work." The former was seen as potentially taking away from the latter : "If VO's continue to run projects (i.e. rather than withdraw), project management rather than promotional/educational work will dominate." Thus, the formalisation of what is now an informal managerial process in voluntary agencies is questionable but without it, "collaboration" with the government may be a moot issue.

People's Participation

The emphasis on people's participation represented the voluntary health sector's first major diversion in 'style' from the normal patriarchal pattern of service delivery. Although it is a cornerstone of voluntary health action, many voluntary leaders admit that the extent of community involvement in their projects is "insufficient." Some are unclear as to what they wish to achieve through it. Others demonstrate contradictory stances, for example, calling for participation in programme planning, decision-making and implementation but at the same time for better project 'supervision' of community level workers. This lack of clarity regarding objectives has meant a paucity of ideas about mechanisms to foster community participation. Few projects have even established proper communication channels between project staff, village residents and workers, although this would seem a fundamental pre-requisite to decentralisation. Even though voluntary agencies are believed to have their 'ears to the ground,' there is rarely awareness of villagers' reactions to their programmes. While they often build up and tap community organisations, the extent of health activity that these

have undertaken has remained small. The alternative device of village health committees has also played a limited role (see Chapter 5). The functioning of both sets of 'institutions' has been poor in most locations and it is widely acknowledged that better strategies for community participation need to be evolved.

Although the "creation of demand" is a major objective of participation, few—if any—voluntary agencies have built up the necessary self-confidence to enhance the capacity of their clients to be effective in their interactions with the government health system. Nor have they really mobilised people to put pressure on the government to deliver on its health schemes. Related to these inadequacies is the failure of most voluntary health programmes to develop local leadership among their target groups (ostensibly because of a lack of capability). Although this is perceived as necessary for a programme's long-term viability and ultimate independence from 'external' project managers, few voluntary agencies can envision a world without themselves.

Weaknesses of Voluntary Organisations

Besides the weak points of voluntary organisations that have already surfaced in the preceding discussion, a few others need to be pointed out as potential obstacles to voluntary agency collaboration with government.

'*Isolationism*': A troubling aspect of voluntary health action to date has been its failure to reinforce itself through interactions or networks among individual groups. Voluntary agencies tend to work in isolation so that their individual successes and failures remain largely unknown. This is due in part to their spatial spread, ideological diversity and programme heterogeneity, but not the least to notions of "uniqueness" and egotism among project leaders. The few "apex organisations" that exist, such as the Voluntary Health Association of India (VHAI) or the Christian Medical Association of India (CMAI), focus more on providing inputs to individual programmes than on the creation of forums for the sharing of experiences, which could lead to better programmes. An exception, the Medico Friends' Circle, has remained small, though purposive. A dialogue between groups with common objectives could enhance

the learning process through which most organisations struggle, and make for more effective utilisation of scarce resources. Links with other institutions, such as training, management or research centres, could also strengthen the quality of voluntary effort.

There is a parallel sense of isolation between voluntary agencies and the government. Despite attempts by government institutions (such as the ICMR and more recently the Ministry and National Institute of Health and Family Welfare) to bring leaders from the voluntary health sector together with bureaucrats and technocrats, there has been no systematic collation of experience, or building on the knowledge gained from the dialogue.

Another outcome of the isolation of voluntary agencies is a duplication of effort. Despite the 'criterion' that voluntary action occupies 'gaps' created by the lack of public infrastructure, they often operate in areas where public services already exist, labelling these "underdeveloped" and "ineffective." This often has the effect of further deterioration in the government health facility, so that ultimately the private service replaces the public one. It is this trend which (although still fledgling today) is tantamount to "privatisation as denationalisation" in health services.

Voluntary agencies occasionally even overlap with other voluntary agencies, creating a sense of competition which further isolates the groups from one another. In terms of the national health effort, all this duplication is wasteful. Finally, the absence of concerted 'spokesmanship' within the voluntary health sector has engendered a situation where the wood is being missed for the trees.

Expansion and replication difficult. A major reason for softpedalling the National Health Policy's approach to the voluntary sector is a well-known weakness of voluntary health programmes—the difficulty of expanding or replicating them. Recognising the 'particularities' of their projects, many voluntary agency leaders abdicate a desire for replication—and thereby, perhaps also, responsibility to relevance. This attitude has led to accusations of voluntary projects being "little pockets of excellence (which) do not carry much significance." A few voluntary health agencies have sought to enlarge their programmes

through processes of expansion or replication. Experience has shown that success at the micro-level does not ensure larger-scale achievements even in the same location and with the same staff. Although the process of expansion may be gradual, project leaders are often unable to 'keep tabs' on the villages or workers subsumed into the larger programme and 'quality control' is lost. If the programme becomes too large they begin to face problems similar to those afflicting the government infrastructure. The 'endogenous development' that took place at the village level instigated by the 'outside' agency is difficult to achieve at the 'project level' (Hirschman, 1967; Lele, 1975).

Pyle (1981) has explored the problems experienced with 'replication.' The usual assumption on which replication efforts proceed is that the 'materials and methods' used in the small-scale effort can simply be "scaled up." What is ignored is that the original project consisted of a set of inputs which were implemented in an iterative manner. "Process" is forgotten, and the 'time frame' sought to be compressed. The consequent dilution of effort makes for an ineffective large-scale programme and disillusionment with the original project ensues.

A combination of expansion and replication occurs when a voluntary agency itself attempts to greatly enlarge the ambit of its activities, for example, through the government health system. A significant aspect of this 'collaborative replication' process is the need to adhere to the government pattern of health services and to its established budgetary norms. The voluntary agency may be given 'technical' but not 'administrative' control of the government infrastructure. It directs the activities of the government personnel and provides additional staff to the health services.

Several problems surface in this kind of arrangement. For example, government personnel may be paid less than their counterparts in the agency, leading to resentment and even insubordination. Its inability to 'hire and fire' may hamper the agency's effectiveness in the government structure. Another problem is that vested interest groups, such as private practitioners, may perceive a greater threat from the collaborative effort than they did from the voluntary agency and the government separately. Constrained to follow the government's budget, the private agency may have to 'economise' as the availability of

funds per caput will be considerably less than in the original project.

In short, while 'collaborative' replication may be desirable to improve the quality of government health services, it is extremely difficult.

Limited transferability of learning. Voluntary agencies have been called "learning laboratories" (Korten, 1979) because the flexibility that characterises their programmes has permitted 'experimentation' with different strategies and methods. As a result, some have evolved effective modes of primary health service delivery which deserve close scrutiny in the context of the national proposal to deliver health to all. 'National learning' may be possible with regard to the design of specific intervention strategies and perhaps in the areas of health personnel and their management. Management specialists tend to view 'management' "at the core of the process of replication" (Subramanian, 1982). While admitting that small-scale projects function well because of their adaptability to local situations, they contend that a "model" or a specific package can be evolved which can be used in different locations.

In this context, it bears mentioning, however, that most voluntary agency health projects were started as efforts to provide services, to train or do research, and even their individual components were not designed as 'models' or 'packages.' Thus rather than the *individual* experience of 'successful' voluntary health programmes, it is the *cumulative* experience that might point to technologies, methods, and modes of organisation that have worked in a variety of locations and situations, and therefore have wider applicability.

The other side of the coin is that the government is in fact dependent on the non-governmental sector for innovation. The uniform pattern of health services across the country and the pressures under which government programmes are implemented do not permit the kind of experimentation that is needed to develop primary health care strategies.

Problems with diversification. Voluntary health programmes are often extolled for their "integrated approach" which, in addition to providing health services, addresses the underlying causes of ill-health. Although there is little doubt that the promotion of social and economic development activities can

assist the health effort, many problems arise in the course of combining health and development activities, or 'diversifying.'

Some attempts at integrating health work with efforts in other sectors are rendered ineffective because the health agency cannot provide the specialised services required for each activity. Intersectoral action often engenders a confusion of staff roles, vagueness about responsibility (even infighting) and lack of coordination. As projects grow horizontally, there is also the danger that vertical linkages may become weak, usually leaving grassroots workers in the lurch.

Although there are examples of successful 'health and development' agencies, greater success in integrating health and development action may perhaps be achieved if health organisations didn't attempt to provide the developmental services themselves, but joined instead with other agencies working on the provision of food, water, education, social justice, etc. in addition to pressurising local government bodies to deliver the services for which they are responsible. However, as already noted, the isolation of voluntary agencies from each other and from the government is a major deterrent to this strategy.

Lack of impact evaluation. Paradoxically, while voluntary health projects are credited with favourable impacts on the demographics of their target populations, their "monitoring" and "evaluation" components are weak—or non-existent. Visits to voluntary health agencies almost invariably reveal poor data collection and recording systems. A few projects conduct surveys to learn about the health problems of their areas but baseline surveys at the inception of a programme are extremely rare. Some projects "map" their target populations and establish household-level information dossiers. Rarely are records designed and deployed in such a way as to give continuous feedback on the programme.

In view of the voluntary sector's reputation of being sensitive to local needs and problems, the absence of systematic diagnoses of health conditions and of the effectiveness of their services through monitoring remains a major scientific lacuna. Gwatkin, Wilcox and Wray (1980) reviewed ten voluntary health projects from around the world which had "incorporated the concept of the scientific method." Two of these were in India—at Jamkhed and Narangwal. The latter was a research

programme designed specifically to study the effectiveness of different health interventions, and so collected adequate data. In the early years of the Jamkhed project, "results" were extrapolated from a comparison of *estimated* vital rates at the project's initiation and later measurements. Comparisons with control areas were not tested for significance. The authors concluded "the efficacy of the Comprehensive Rural Health Project in Jamkhed in lowering mortality must be assessed with caution." Jamkhed is cited as one of the most impressive/successful health projects in the country. While there may be other criteria of success besides improvements in health indices (such as "community participation"), it is difficult to select, leave alone 'measure,' these and they are insufficient to prove health effects.

Costs uncertain. Voluntary health programmes are also regarded as "successful" because their effectiveness is believed to be accompanied by low costs. However, estimating the costs of voluntary health programmes is uncertain (even treacherous) territory. For example, cost data rarely, if ever, compute the value of donated goods (which may include medicines, vaccines, food, buildings, vehicles and other expensive items) or of 'free' labour, and so it is difficult to arrive at correct total cost or even capital investment figures, or estimate the proportion of costs 'contributed.' Efforts to compare different projects or to contrast private and public health expenditures are thwarted by the problem of appropriate denominators. The latter comparison may be made on the basis of per capita costs obtained by dividing the total cost of a project by the size of its target population. However, the extents to which target populations are actually served differ, limiting the usefulness of this method of cost comparison (Pyle, 1979; Pyle and Choudhury, 1980).

It is unclear whether economies of scale exist in primary health projects. While Pyle's estimates (1979) of per capita costs for the Maharashtra projects seem to be inversely related to the size of the project, this did not emerge in five Bangladeshi projects studied (Pyle and Choudhury, 1980). However project costs per caput may decrease with time, as capital investments decline, as treatment 'backlogs' are covered, and when a programme has positive effects on the health of a population. Clearly, however, costs also depend on the type of services being

delivered, besides the extent of coverage. Primary health projects may keep costs down unless they add secondary and tertiary level services, a danger that Sen Gupta (1983) has pointed out. In the case of projects which provide health services as well as other development services, it is extremely difficult to estimate the costs of the health component as many facilities staff, vehicles, buildings, etc. are shared among different activities. Indeed, some projects undertake 'development' activities to raise funds to support health work in a quest for "self-sufficiency."

"*Self-sufficiency*"? While the goal of "self-sufficiency" (ACHAN, 1983) represents an aspiration of some voluntary agencies to provide health services at low 'cost,' it emanates from a practical problem facing many agencies—shortages of funds to meet their disbursements. Many modalities are used of which the most relevant in the context of national health policy is the raising of contributions from target communities.

Several reasons are given for attempts at local resource generation. First, it is believed that by making target populations contribute toward services, they will place greater value on health and health care, and that this, in turn, will result in health improvements. Second, it is felt that people benefit in psychological terms from contributing because they are then not receiving charity. Third, resources mobilised from communities (whether money, materials or manpower) are perceived as tangible expressions of "felt need" and demonstrations of acceptance by the community of the service organisation. Fourth, community financing, it is believed, will bring about 'accountability' among the service providers and thereby improve the quality of services provided. Thus, the strategy of community financing can be thought of as 'demand creation' and 'consumer organisation,' associated with psychological and social upliftment.

However, there are also 'external' reasons why voluntary agencies seek to become "self-sufficient." Many community health programmes are initiated with financial assistance from foreign donor agencies, who prefer to provide assistance to create infrastructures or introduce innovations, but not to meet recurring programme costs. Both the donor agency and the project holders hope that their dependence on external funds

will diminish with time. In fact, "self-sufficiency" is a criterion often used by donor agencies to evaluate the programmes they support, and by project leaders to gauge their own "success."

Of course, besides foreign donors there are other sources of support for voluntary health programmes, including local philanthropies and government grants-in-aid. Although the issue of self-sufficiency has been looked at primarily with regard to foreign donations, it is also relevant to receipts from these other sources.

The main mechanism which voluntary health agencies have used to raise contributions are service fees, "insurance" premia, and income-generating schemes either for the service organisation itself or for clients who then contribute a portion of the income earned to the service providers. Clearly, a major assumption underlying the pursuit of self-sufficiency is that resources are readily available in the community and that it is just a question of mobilising them—a task which the health service organisation takes upon itself. This strategy is seen as necessary to reduce the "maa-baap" mentality and dependency.

However, the resources raised remain small. In the seven projects surveyed by Pyle (1979) in Maharashtra small amounts were charged for medicines and in one case two per cent of project costs were realised from such sales. In another, 60 per cent of the honoraria paid to village health workers were met by gram panchayats but no other contributions were made. Among the five projects studied in Bangladesh (Pyle and Choudhury, 1980), less than 5 per cent of costs were recovered from the target populations through fees, sale of medicines, and other income-generating schemes. One project which reached a figure of 10 per cent cost recovery did so by charging for nutrition rehabilitation in cash and kind—which would seem a most unethical practice given that children requiring nutritional rehabilitation usually come from the poorest families!

A common technique voluntary agencies use to raise funds from their clients has come to be known as the "Robin Hood method." However, this method is not without its pitfalls, as Bang (1983) has pointed out. Rich patients who pay more tend not to be satisfied with simple (low-cost) health interventions, and begin to demand "sophisticated" medicine. The health

programme is then forced to invest in expensive equipment and specialist care.

Although even this scenario may be justified on the grounds that dependency among rich patients will guarantee their contributions to the health programme, Bang has warned that such programmes may become more dependent on well-to-do clients than vice versa. Inevitably, the costs of the health programme will rise, and there may be moves to increase the charges levied on the poor. This, in turn, will result in the exclusion of those who are unable to pay, and "utilisation" will be skewed towards the rich.

One may conclude that if the primary concern is to get health care to the poor, self-sufficiency is an unattainable goal. The process of raising community contributions may conflict with the goal of social justice—in particular, with the goal to make health care available to those who have not had any in the past.

Collaboration between Government and Voluntary Sectors

The issue of privatisation or collaboration between government and the voluntary health sector must be viewed in the light of the common features, differences, problems and possibilities of voluntary health agencies described above, but it is useful to first review current thought on the subject.

Perceptions

As already discussed, the National Health Policy Statement suggests that government interest in collaborating with the voluntary sector in the field of health has as its immediate cause, the inability of the public health system to deal effectively with national health problems. A partnership between government and voluntary sectors is expected to overcome some of the structural weaknesses of the macro health system and to result (in the 'immediate term') in better utilisation of the government's resources.

However, close scrutiny of some other government documents reveals a somewhat confused view of the relationship between government and voluntary sectors. A recent publication of the Ministry of Health (MOHFW, 1985) stresses the

steps that government has taken to date to support the voluntary sector and refers repeatedly to the fact that non-governmental agencies "supplement" government efforts. This view is expanded somewhat in the following statement of the National Institute of Health and Family Welfare (1977) :

> These agencies are mainly engaged to supplement the work of official organisations, to explore ways and means of doing new things, such as the spearheading of family planning movement in India and putting up demonstration and experimental projects . . . (p. 11).

Recently, the Approach Paper to the VII Plan (1984) translated the recommendations of the National Health Policy to involve voluntary organisations into a broad action strategy. It identified the areas of family planning, health education, and curative medicine as important, and suggested five ways in which voluntary agencies can participate—in planning, education, service provision, resource supplementation, and innovation.

Thus, the government view of collaboration with the voluntary sector is largely one of encouraging the latter to fill the cracks between government health programmes, to undertake experimentation, and to provide resources. This is accompanied by the belief that government support and reinforcement (e.g. wider-scale application of private innovations) will serve to give the voluntary sector the additional momentum it *requires*.

A somewhat complementary attitude exists in some quarters of the voluntary sector. For example, an editorial in a newsletter of the Asian Community Health Action Network, which includes some Indian voluntary health groups, proclaims :

> . . . cooperation between governments and NGOs is unlikely to be very effective unless a significant portion of the initiative and the creativity in this relationship comes from the government (ACHAN, 1982).

Another instance of this perception is provided by a national networking agency. At a seminar convened by the Voluntary Health Association of India to discuss the National Health Policy Statement, the main objectives set were the

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"dissemination of the policy and identification of modalities for collaboration with the Government in its implementation at every level." Although the Association has recently been concerned with issues relating to the demedicalisation of health care (such as low cost drugs, health education, and the integration of health and development programmes), it does not seem to see a role for itself as a pressure group on the government to adopt favourable strategies, norms or policies in this regard.

Thus, it appears that NGOs are perceived both by themselves and the government as playing a supportive and not a lead or 'forceful' role. Not only can they not "push or instruct government" (ACHAN, 1982), but their creative instincts have apparently to give way to government ones. Along these lines an extreme suggestion has been provided by Roy (1985) who states that because the voluntary sector is "demoralised and splintered" and suspicious of its fellow members on account of "irregularities" and politicisation within it, the government is "the only agency capable of bringing factions together."

There are other, more complex, perceptions of the proposed collaboration. One emanates from the gap that is discerned between the government's avowed recognition that voluntary organisations should be involved in the national health effort and its positive action in this direction. While higher echelons of government believe that the earlier attitude of government as 'patron' and voluntary organisations as 'clients' has changed into one of equal partnership (MOHFW, 1985), voluntary agencies allege that this change has not permeated lower levels of government with which they deal more frequently (Roy, 1983). This attitude arises in part from governmental perceptions of non-governmental organisations as 'competitors' or as redundant entities. It belies the possibility of collaborative relationships and nullifies the reason why collaboration was sought in the first place.

Government Assistance to Voluntary Health Agencies

According to the Ministry of Health (MOHFW, 1985), the government has taken several steps to date to "collaborate" with voluntary health organisations. In the 1950s, a Board of

Inspection (sic) was established by the Ministry to visit voluntary medical organisations and encourage them to "supplement" government efforts. The Board was instrumental in recommending financial assistance to these agencies, and, indeed the grant of funds has been the premier mode of "collaboration" between the government and voluntary sectors. Upto 1983-84 such assistance had been provided to 854 organisations under two governmental schemes, one initiated in 1954-55, the other in 1975-76. Either full (100%) or matching (50%) grants were given to organisations for the control of TB, leprosy and cancer, the control of blindness and treatment of eye diseases, and for the establishment of occupational therapy facilities. Assistance is given for non-recurring expenditures such as the purchase of "costly essential equipment" including Xrays and operation theatre equipment, and for the construction of hospital facilities, including operation theatres, laboratories, and wards for the poor. Another scheme provides NGOs with partial funds to establish upto 30-bed hospitals and dispensaries in rural areas where facilities are inadequate. In addition NGOs are assisted specifically to promote voluntary blood donation, organise eye camps, and promote family planning.

How does the voluntary sector view this modality? The issue of taking funds from government has perhaps been divisive. On the one hand, there is the feeling that government funds are public funds and so the government should make more available to the organisations who are in touch with the people (Roy, 1983). In turn, some NGOs feel that taking government funds ensures credibility with the government and the people, and accountability to them.

However, it is felt that bureaucratic procedures to obtain or account for these funds should be minimal and that they should not have "strings attached." Many agencies are daunted by the "red tape." Agencies outside Delhi complain that they lack the money and time required to pursue assistance from the Central government. Their experiences with state governments may be similarly problematic.

While reporting that his experience with government funding has been encouraging, Roy (1983) laments that a voluntary agency becomes committed to "a straight, tangibly-oriented

programme that has no room for improvisation or intiative" if it takes funds from government. In general, Roy perceives the "attitudes and approaches" of government officials towards NGOs may cause problems for voluntary groups, driving them to seek their funding elsewhere :

> A foreign donor agency comes with a human face; the government in many cases think they are doing us a favour. The former comes as an equal and is prepared to consider the agency efficient unless proved otherwise; the latter does not believe in equal partnership and in 80 per cent of the cases considers NGOs guilty of corruption, of irregularities, of inefficiency . . . (Roy, 1983).

However, while "alternative" sources of funding were important in the past, they have recently become more difficult to tap because of some legal changes. The amendment of the Foreign Contributions Act (1985) now requires organisations receiving foreign donations to obtain prior clearance from the Home Ministry. The removal in 1983 of the tax exemption earlier given to business houses for their donations to development work has led this source of funds to dry up considerably. Thus, voluntary organisations will need to turn increasingly to the public exchequer for funds.

However, NGOs sometimes feel (and the feeling is mirrored among government officials) that accepting funds from government may destroy their "voluntary nature." They are wary of being dictated to by bureaucrats or politicians. In contrast to expectations of credibility, they are sometimes accused of corruption and inefficient use of public funds. Despite the contractual nature of funding agreements, "misunderstanding"—either genuine or 'engineered'—can lead to the application of *ad hoc* decisions. These fears lead many to stay away from government grants which perhaps explains why funds meant for private programmes often go unutilised. The "communication and credibility gap" thus remains a major constraint to government-NGO collaboration.

Conclusions

It seems clear that the criticality of the voluntary health sector to national health lies not in its size—which is small in terms of its coverage of the nation's population, but in the nature of its experience with primary health care, which however has been only faintly "evaluated." The "ingredients of success" of voluntary health action are by and large not multiplicable. The innovations which voluntary agencies make arise largely from specific local needs, and only a handful of projects can be credited with "model" developments. Despite the government's dependence on private sector experimentation, the lessons of voluntary agency experience have had a limited applicability to the macro health system, as efforts at "expansion" and "replication" have demonstrated. This constrained reality contrasts markedly with the policy prescription for "privatisation" which implies large scale deference on the part of the public health system to the private health sector.

Another attribute of the voluntary health sector that puts pay to the possibility of "privatisation" is its considerable heterogeneity. "Charity-oriented," "developmental" and "political-activist" agencies make different contributions and would require different approaches on the part of government. It is unlikely that 'formulae' can be evolved to deal with the many different types of agencies. In the absence of a standard but effective approach, the government may find its interactions with the voluntary health sector too costly. Indeed, despite the changed orientation of voluntary action from "social welfare" to "development," a look at its interactions with government reveals no new modalities.

Thus, any official attempt to decentralise health services through the voluntary sector ('using micro-level projects to deliver macro programmes') would be severely limited by its small size and heterogeneity. The government's hope to increase people's access to primary health care through the private sector therefore, will have to take the form either of increasing the size of the voluntary health sector several-fold, or of markedly improving the capacity of government health services to 'absorb' its significant lessons. The first of these options clearly has limited potential, given the very special needs (besides finances

and technical know-how) of voluntary health action (e.g., dedicated leaders, community rapport) which cannot be 'produced' on demand by the government or anyone else. The second route, therefore, is far more important if collaboration between the government and voluntary sectors is to have any meaning to the national health effort.

Although this logical progression of thought leads to the conclusion that *the voluntary sector must help the government* to gain 'know-how' with regard to delivering primary health care and to improve the functioning of its health services, thereby enhancing its efforts and maximising the effectiveness of its resources, the tendency to date has been to concentrate on how *the government must help the voluntary sector.* Hence the debates about funding, cooptation, and so on. Instead, the focus of attention should be on *how the significant learning of the voluntary health sector* can be inculcated by the macro health system.

A major conclusion that arises is that the government would do best to view voluntary health efforts as "alternative developments," nurseries of a new health praxis, rather than as "conduits" for government schemes. In lieu of "privatisation" in the health sector, therefore, a more fruitful approach would be the sustenance of an independent, voluntary sector for health. This does not rule out certain limited modes of collaboration between the government and private voluntary agencies, but it does argue against any major interlocking of the two systems. Specifically, the following activities can be envisioned which would be useful and not detrimental to the national health effort :

(1) Continued "experimentation" by voluntary agencies to develop approaches and methods relevant to the macro-health system in the country (along with their other service and training objectives).
(2) Pressure from the voluntary health sector on the government (a) to improve its services so that more people enjoy access to them and (b) to develop structures capable of "replicating" proven approaches on a larger scale.

(3) Funds from the government to voluntary agencies for specific project inputs and relevant research.
(4) The collection and dissemination of information on both private and public health programmes, and networking of 'actors' in both fields, undertaken by both public and private institutions.
(5) Interaction between the two sets of actors to foster a greater effort to educate the public, particularly by government institutions and large "national" NGOs.

A few more details on each of the above activities are in order.

Experimentation by Voluntary Agencies

The emphasis here should be on 'relevance.' Voluntary agencies must become more accountable of their own accord to the national health effort by undertaking only those programmes and research projects that are relevant to the health needs of the country. For example, useful 'action-research' is necessary in the area of simple health technologies (see Chapter 7), on low-cost but effective health care, on defining personnel roles, and so on.

The voluntary sector is well aware of the deficiencies of the government health system at the ground level as well as at the top. Yet few projects have developed specific health strategies keeping these in mind. If there is a prevailing sense that government structures must change, the major questions are: what changes must be made and how can they be brought about? Thought clearly needs to be given to evolving 'methodologies for replication.' The corollary is that voluntary projects must be evaluated with respect to their relevance to the development of an appropriate health care system in the country.

Voluntary Agency Pressure on Government

This must occur at all levels. The voluntary sector's 'ground-level' potential to mobilise people has more far-reaching consequences than its circumscribed service-provision role. Besides "equipping the poor to care for themselves" e.g. by training village-level workers, voluntary agencies can organise people to demand better government health services and use them. The creation of duplicate infrastructures must be avoided. At the

macro-level, greater cohesion within the voluntary sector could work to pressurize government to improve its policies, planning, programmes and implementation, and to develop receptivity to new ideas and methods. An approach which accepts principles and fosters the evolution of local strategies would be most useful.

Clearly, before the government can avail of the knowledge generated by voluntary sector 'experiments' for improved health care, certain fundamental changes must take place within it. Current attitudes must give way to less wary views of private health agencies at all levels of the bureaucracy. There is a need, particularly, to apprise lower-level officials of the role, potential, and needs of voluntary agencies—it is not adequate for hopes of collaboration to be voiced at the Central or even State level alone. It may be useful to have State or district-level committees or consultative groups, including voluntary leaders, to evolve local strategies for collaboration. Ultimately, even the limited relationship between government and non-governmental agencies which is being advocated here depends on a positive view of voluntary programmes individually and collectively by government at all levels.

The government also needs to consider what mechanisms it has and which it needs to institute to handle "replication" when "action-demonstrations," are proved 'mature.' It is purposeless to support demonstration projects if there are no ways of using their findings. The existence of such mechanisms would in turn make it clear to voluntary agencies what experimentation is useful to the macro system. In a larger sense, VOs and government together could be creating an environment which is conducive to finding solutions to national health problems.

Government Funding for Voluntary Sector

Despite the government's call to the voluntary sector to provide its resources for government schemes, it remains more important for the government to share its financial resources with voluntary agencies. The problems of raising local resources and the shrinkage in other private sources of funds make this necessary. It must be remembered that voluntary health efforts, far from being "low-cost" programmes, have sizeable financial requirements, although the monies expended are perhaps used

more effectively. Both private and public health programmes will require greater financial outlays for their improvement, but there is also room for better financial accounting and more cost-effective spending.

The issue of "self-sufficiency" in health care at the local level has been a red-herring. Although the multiplicity of funding sources may have encouraged lax financial accountability among voluntary agencies, the need to provide free health services to the poor and to undertake preventive and promotive health activities means that it is not entirely possible to 'balance health books.' There is clearly a need for more flexibility and smoother working in the government's current grant-in-aid system so that, at the least, funds are not released on the last day of the financial year!

Networking of Government and Non-Governmental Institutions

A means of coordination between government and non-governmental agencies would be useful to enable the three activities suggested above. The current *ad hoc* approach on the part of government is inadequate and potentially quite destructive to the relationship. Government must assess its capability to render "help" to voluntary agencies and endow suitable institutions with the mandate to work with voluntary agencies.

In addition, government technical organisations such as medical colleges, research institutes, and administrative/management institutions could be encouraged to work more with voluntary agencies for a two-way exchange—to meet agency needs as well as to strengthen their own training and research programmes. Such collaboration would be useful only if an 'equal partnership mentality' prevails.

It is clear that collaboration between government and non-governmental agencies—whether defined by funding agreements or technical exchanges—must have clear guidelines. Both government and voluntary sector must be clear on why they are collaborating and what are the nature and limits of their collaboration. To achieve this the government must perhaps first decide what kind of agency it wishes to work with, to fund or to assist. Given the heterogeneous and changing nature of voluntary agencies these definitions may be difficult to arrive at.

The voluntary sector must also institute internal coordinating mechanisms which will strengthen its hands *vis-à-vis* the government. The lack of such coordination has largely been responsible for its limited impact to date. Besides serving their own members, apex organisations should take on the larger role of working as pressure groups on the government. In order to acquire such cohesion, however, voluntary agencies must 'network' themselves rather than depend on 'outside' institutions (e.g., donor agencies, academic institutions, or government organisations) to do this for them. Although links to outside institutions are important to overcome the isolation of individual islands in the 'volag archipelago,' the strengthening of horizontal linkages among voluntary organisations is paramount. Voluntary agencies must learn from each other. Exchanges could help them sort out 'growth and development' problems which, in turn, might provide "added significance" to voluntary health action.

Public Education

This is a vast field of endeavour which could usefully be strengthened by government-NGO collaboration. One modality—that of mobilising people to 'use' government health services has already been mentioned. Another is the use of mass media to promote health objectives. A combination of voluntary agency knowledge of rural peoples' health behaviour and government technology would be useful.

Finally, some modalities that are rejected by this analysis should be mentioned. First, the attraction of private sector resources into public programmes (except through health insurance schemes in the organised sector) would seem to be barking up the wrong tree. Second, the establishment of any "code of conduct" (Roy, 1985) by government for the voluntary sector is likely to restrict voluntary action, and may become an instrument of repression, as Baxi has argued (1985). If government's objective is to foster voluntary action then any administrative or legal procedure which centralises authority is a fundamental contradiction. Forms of regulation already exist; the institution of more may lower the 'utility' of voluntary health activity to national health development. Dialogue between government

and voluntary sectors must concentrate on creating space for voluntary health action, rather than circumscribing it.

Third, the creation of a "semi-autonomous government department for social service" (suggested by Chandra, 1985) would make voluntary organisations extensions of the government machinery and destroy their dynamism. The government should not aim to 'bureaucratise' the voluntary sector. While favourable macro-level policies can reinforce voluntary health action, government "planning" for the voluntary sector would be quite antithetical to it. Instead, the government should concentrate on planning for its own health service system to take into account the lessons of the private sector.

Fourth, while government should encourage the private voluntary sector, 'denationalisation' would work against the interests of national health. Although bids may be made by the private sector to take over government programmes, there are many reasons why health care cannot be left to the private sector alone, whether one considers 'commercial' or 'voluntary' organisations, together or separately. The private sector cannot spread widely and densely enough over the country to adequately meet rural health needs. It lacks the steady resource base and widespread infrastructure that the government has. Its voluntary component depends on funds from external agencies and other uncertain sources. Its profit-making segment will not perform well in rural areas, even given Robin Hood methods. Nor will it provide the public health, preventive and promotive services required, as these are perceived to take away from its livelihood.

Many people in need of health care, need free services because they cannot afford even highly-subsidised ones. In this respect, health care remains a social and community service, and cannot become a fully commercial enterprise (Basu, 1983). The inadequacies of the private sector are clearly demonstrated by the situation in urban areas where, despite a glut of private practitioners, clinics and hospitals, the poor flock to government hospitals and charitable clinics. The heavy demand on these facilities may suggest that they should be expanded; but, perhaps more important, is the need to reserve these free public services for those who need them most, keeping out the affluent who can well afford to patronise the private sector.

Whatever be the allegations of inefficiency or corruption levelled against the government health system, and even if private sector efforts are better managed, the government cannot abdicate its responsibility for health care. At most, the private sector can contribute to the national health effort by providing special services, generating knowledge, mobilising people, and exerting pressure on government to fulfil its responsibility.

Such, then, are the limits to "privatisation."

CHAPTER 7

SPREADING PRIMARY HEALTH TECHNOLOGY

While inadequate knowledge of health conditions and their underlying causes as well as poor organisation of services are considered obstacles to the implementation of primary health care, the availability of technology is not in this category. This is largely because primary health care is designed around existing technologies. For example, it is believed that the 'unnecessary' mortality of 0 to 5 year olds can be tackled with a relatively simple "package" of interventions—antenatal check-ups for pregnant women, along with tetanus toxoid administration and nutritional supplementation; immunisation of infants against six infectious diseases (diphtheria, pertussis, tetanus, tuberculosis, poliomyelitis and measles); treatment of diarrhoeal diseases with oral rehydration salts, and of respiratory infections with antibiotics; and growth monitoring to prevent and 'treat' malnutrition (Rohde, 1982).

Indeed, an objective of primary health care is precisely to spread these and a few other technologies. Lewis Thomas (1979) has termed them "real high" technologies because they are addressed to significant problems, are effective, inexpensive and inconspicuous, in contrast with "halfway" technologies, such as cancer therapy or organ transplants, which are "simultaneously highly sophisticated and profoundly primitive." The major difference between these two types of technologies is,

perhaps, the level of knowledge on which their dissemination depends. Sophisticated medical technologies are 'mystified'—the purview of a few—while primary health technologies are based on knowledge that can be transferred to a population at large.

Transferring knowledge or technology, however, has several preconditions and requirements. The system which is charged with delivering the technology must have the capacity, skills and management to reach its clientele. The technology itself must be acceptable to clients, which may call for its 'adaptation' to local conditions; and, therefore, the delivery system must also be capable of adapting it. Organisation of clients may be necessary in order for them to benefit from the technology. Many primary health technologies are oriented to behavioural change among service providers as well as beneficiaries, for which well-worked-out educational strategies may be required. Thus, it is not possible to separate the attributes of a technology from those of the delivery system handling it or from the social milieu of its target population.

Accordingly, this chapter explores some of the intricacies of primary health technologies, and identifies some conditions and requirements that must be fulfilled for their spread. A case study approach is used in which one primary health tool—the growth chart—serves as the paradigm for primary health technologies. The problems encountered in the spread of this technology through the health care system are discussed and some limitations pointed out. This case study has been presented in much greater detail in the context of a review of global experience with growth charts (Gopalan and Chatterjee, 1985).

Although growth monitoring is not currently being undertaken widely in the governmental health service system, it is one of the focal activities of the national Integrated Child Development Services (ICDS) Scheme which involves health department personnel at all levels. The Scheme seeks to deliver integrated basic health, nutrition and education services to children in the 0-6 year age group and to reproductive-age women. At the end of the Sixth Plan it covered a thousand administrative blocks throughout the country, and will be extended to serve another thousand in the Seventh Plan period.

Thus, in terms of the dissemination of a 'simple health technology,' growth monitoring in ICDS provides experimental evidence of considerable proportion. For the case study, six blocks in the States of Rajasthan and Haryana in which the ICDS programme had been in operation for at least three years were selected.* Primary-level field workers, their supervisors, and medical personnel associated with the programme were interviewed, information and views being solicited on all aspects of growth monitoring. A small sample of clients, in this case, mothers of children participating in the scheme or those enrolled themselves, were also included. In addition, available records were reviewed. To verify these field observations, other studies of growth monitoring have been examined. Several non-governmental health projects in the country undertake growth monitoring and reports of their experience have been drawn upon.

The Technology of Growth Monitoring

Conceptual Basis. The technology of growth monitoring is based on the scientific observation that growth is a sensitive indicator of nutritional status (Jelliffe, 1966). Because of the intimate relationship between nutrition and health, particularly in the child under five or six years of age, growth monitoring also permits assessment of overall child health (WHO, 1978a). In the early years of childhood, growth is rapid and any deviation from "normal" can be detected. Growth faltering calls for attention both to nutrition and to the possibility of infections.

It is believed that health workers can learn to identify children in whom growth is faltering using growth monitoring techniques, to provide them with the necessary care, and even to transfer this knowledge to mothers (Morley, 1973). It is this belief that has led to the inclusion of growth monitoring

*This study was undertaken in collaboration with Dr. C. Gopalan, Nutrition Foundation of India, and has been published as a Special Report of the Foundation (see Gopalan and Chatterjee, 1985).

among primary health technologies. Its spread is advocated to enable the diagnosis of ill-health in young children and the provision of integrated nutrition and health services to them. In fact, it has come to be considered a crucial component of child health programmes. For example, it occupied pride of place in "GOBI" (Growth monitoring, Oral rehydration, Breastfeeding, Immunisation), UNICEF's world-wide strategy for improved "child survival and development" (Grant, 1983).

Application. Although a variety of anthropometric measures, such as weight, arm-circumference, and so on, can be used to assess child growth, weight is regarded as the most sensitive and practical parameter (Jelliffe, 1966). A child's weight can be plotted at regular intervals against his or her age, giving a "weight-for-age" graph. While a single weight measurement is difficult to interpret, serial measurements can demonstrate a steady-state, an increase or a decline in a child's weight. Thus, the most common application of the concept of growth monitoring is found in the "growth chart," a tool predicated on the principle of regular monthly weighing of subjects and permitting visual examination of the growth pattern of an individual child (Morley, 1973; Morley and Woodland, 1979).

Weight measurements can also be 'standardised' for a given population of children, and 'reference' growth curves evolved. Comparing an individual child's growth trajectory with that of a healthy population permits one to determine whether the child is following the "Road to Health" (Morley, 1973). Thus, the growth chart can be used for timely attention to illness or improper feeding underlying growth faltering.

The growth chart is commonly incorporated in a "Child Health Card" which records additional information on the child —his/her health "risk" factors, such as family socio-economic status, birth order, etc., history of illness, immunisation, and even feeding history. The use of this information along with the growth records permits a systematic and comprehensive approach to the diagnosis, maintenance or recovery of child health.

While growth charts are primarily individual records they can be used to assess the extent and severity of malnutrition in a

population. Thus, growth charts can be used to target health-nutrition programmes, and to evaluate the effectiveness of interventions (WHO, 1978a).

Because of its wide-ranging applications, growth monitoring may be unique among primary health care technologies. It is useful for preventive, diagnostic and curative health work. It is regarded as an 'objective tool' to select children for nutritional and medical interventions, such as supplementary feeding, immunisation, deworming or nutritional prophylaxis, and to assess the impact of the interventions on child health. At the macro-level, growth charts can be used to prepare 'nutritional profiles' of populations and thereby as the bases for the formulation of health-nutrition programmes and policies. The growth chart also serves as a tool to educate health workers—from pediatricians to village-level personnel—and mothers about child health and nutrition, and to motivate them to improve the conditions and practices that effect these states.

Process. For its multiple potential, growth monitoring is well worth "spreading." However, the fulfilment of this potential depends to a great extent on whether the health system comprehends its principles thoroughly, and institutes adequate mechanisms to follow through the process involved in its use. Besides requiring appropriate "hardware," (e.g. weighing scales and charts), there are several operational steps on which the utility of the technology depends. For example, scales need to be checked for accuracy and handled impeccably at the time of weighing. Weight readings must be taken carefully. A child's age must be correctly assessed, and his weight-for-age plotted accurately at every weighing. A sufficient number of weight points must be obtained on each child in order for his "curve" to be visualised and interpreted. Interpretation must be thorough, and appropriate "follow-up" action must be taken to render this a useful tool. Thus, although growth monitoring appears simple, it calls for considerable skill and care. Workers must be appropriately trained and supervised to ensure reliable data and its proper use for health action.

Requirements for Effective Use

A system capable of the multidimensional activities involved in the implementation of growth monitoring is clearly its *sine qua non*. The various requirements and attributes of a system to spread such a primary health technology are presented in the form of propositions. While they are substantiated here by specific reference to growth monitoring, most or all of these propositions apply also to other primary health technologies.

Adequate supply and proper maintenance logistics : a must. Although this may appear so obvious as not to deserve much consideration, inadequate supplies and poor maintenance of equipment may so severely hamper the use of primary health technologies that the breadth of possibilities bears illustration.

In growth monitoring, the supply and maintenance of two items—weighing scales and growth charts—are critical. Yet shortages of both are ubiquitously reported in both governmental and non-governmental growth monitoring programmes in India (Nutrition Foundation, 1984) and other countries (eg. Solon, 1983; Fajans and Sudiman, 1983). Besides increasing the burden on workers, such poor logistics make for sloppy results. Frequently, children most in need of growth monitoring may not have charts and therefore are excluded from the benefits of the technology. *Ad hoc* 'substitute' procedures diminish the utility of the technology. Shortages of hardware inevitably mean that the use of the technology is disrupted, and it is consequently devalued by workers and clients alike.

Several types of scales are available for weighing children, differing in accuracy, suitability (to workers, working conditions or clients), durability and price. The scale of choice in most growth monitoring programmes is a "hanging" type on which children are "suspended" for weighing. These scales are readily portable but require frequent checking for accuracy. Observing growth monitoring operations in the field, one found that workers did not check the scales as they had not been trained in this relatively simple procedure, and had not been provided the necessary tools to do so. Several machines were inaccurate, others needed repair and the growth data obtained with them was quite defective.

Clearly, therefore, the use of this technology requires not only proper arrangements for procuring and distributing weighing scales and growth charts in adequate numbers, but also maintaining and repairing or replacing the former in the event of breakdown, and constantly replenishing supplies of the latter. Analogously, other primary health technologies (such as immunisation or oral rehydration salts) depend on equipment and supplies for which the delivery and maintenance lines are crucial.

Manpower must be appropriately trained and deployed. Growth monitoring technology was originally developed for use by doctors and nurses at health clinics. Commonly, paramedical personnel who visited villages and homes referred children to health centres for weighing, which was then carried out under the supervision of medical staff. Under these circumstances, little doubt was cast on whether the skill-level of the person using the technology was suited to it, and results were assumed to be of high quality.

However, with its inclusion among primary health technologies, growth monitoring must be spread at the village-level. At currently-conceived health personnel:population ratios, it would require very high levels of organisation for paramedics such as Auxiliary Nurse Midwives (ANMs) to monitor all children in their target populations. For example, Cowan has described a procedure by which ANMs in the project area of the Christian Medical College—Ludhiana monitor their target population of children in a selective, highly ordered manner, under the constant supervision of medical staff (Nutrition Foundation, 1984). Alternative techniques are used and much discretion is vested in the paramedical staff. Although the effective deployment of trained manpower has permitted the spread of growth monitoring in this instance, replication of this system on a larger scale would not be possible. Instead, the objective of universal coverage of young children with growth-monitoring is usually sought to be met by entrusting this technology to village-level health workers, such as community health volunteers, *dais* or child-care workers.

Although growth monitoring and the type of care possible with the Child Health Card were not included in the job descriptions of governmental community Health Guides, the

Anganwadi Workers of the ICDS programme are 'public' village-level personnel. On her visits to ICDS centres, the author observed that *Anganwadi* Workers who had eight to ten years of schooling understood and performed the tasks of growth monitoring well (though not without errors). However, workers with fewer years of education had difficulty plotting weight data because they did not understand the graphical nature and 'time dimension' of the growth chart, and so on. As a result, this was a time-consuming rather than a time saving tool and errors were frequent.

Recording weight data is indeed a sophisticated procedure, and not the simple one it is assumed to be. Even medical scientists are often confused (Bailey, 1984)! Anandalakshmy and Sindhu (1984) have pointed out that the conceptual basis of the growth chart requires high-level abstract reasoning to be understood. Educational level is important to attain such understanding, and hence the use of semi-literate village level personnel to spread growth monitoring is called into question.

The interpretation of growth charts is also a subtle and complex business. A health worker requires a fairly sophisticated knowledge of growth dynamics, and of the interrelationships of growth, feeding and health, to comprehend the information provided by a child's growth curve. Experience in the field has shown that 'complete' interpretation is difficult to achieve. In the ICDS blocks studied, workers focused on a child's "grade" of malnutrition (i.e. his weight-for-age at a single point in time), paying little or no attention to his growth curve. A decline in weight was considered significant only when a child became severely malnourished. In the ICDS programme, severely malnourished children qualify for a double ration of the food supplement, and so the growth monitoring technology was being used only to identify such cases. Although the programme includes other strategies for children exhibiting "early warning signs" of malnutrition, they were not being pursued because health workers' failed to interpret growth curves properly. As a result the use of the technology was limited to its curative function, and its prime objective—early detection of growth faltering and *prevention* of severe malnutrition—was not being achieved.

These points illustrate the importance of training for the effective use of growth monitoring techniques: weighing procedures, recording, even matters seemingly as simple as determining a child's age. Workers need rigourous training in how to interpret growth data, and how to diagnose and treat the underlying causes of any adverse findings. The complete use of the technology requires that they also be taught how to instruct mothers on child feeding, illness prevention, and care. Health workers must be skilled in the entire range of tasks associated with its use if a technology is to meet its potential.

In addition to a system that can impart good initial training, continuous practical training and supervision are essential. The provision of "feedback" to workers on their performance is necessary to produce good results. These requirements imply that training in the use of the technology must be given to all levels of personnel, including physicians, paramedics and others who are 'trainers.' A lack of awareness among higher-level staff of the intricacies of growth monitoring or a lack of appreciation of field problems can be a serious constraint to its dissemination.

If the use of a technology such as growth monitoring is added on to the tasks of workers who have multiple responsibilities, it is likely to be less than optimal. While a "vertical" approach may overcome this problem, it is not desirable for primary care. Rather, there is a need for effective functional linkages with other services in order for the technology to 'pay off.' For example, *anganwadi* workers must link up with health personnel in order to provide "follow-up" to growth monitoring. The "deployment" of all these persons is thus critical to the effective use of basic health technology. The size of the population a worker serves i.e. access to clients as well as to 'trainers' and supervisors, and other responsibilities are also important factors.

The issues of workers' skills and deployment are also related to the problems of supply and maintenance discussed above. While paramedic workers may have the capacity to obtain and utilise growth information well, time and distance constrain their access to target populations. On the other hand, village-level workers have easier access to clients, but they are far away from the headquarters supplying charts, scales, repairs, etc. To

overcome these handicaps, additional demands are inevitably placed on the service delivery system. The spread of primary health technologies may ultimately mean that 'quality' is traded off to quantity.

Technology must be user-appropriate to be practicable. The corollary of using appropriately-trained manpower for dissemination is that the technology itself must be tailored to the skills of the workers involved. In other words, a "fit" between tool and user is essential. For example, in growth monitoring, the growth chart must be designed so as to be comprehensible to and useable by village health workers. On the contrary, it is often the case that the spaces provided on growth charts for plotting weights are unsuited to the large hand-writing of semi-literate workers, and they consequently have difficulty using them. This and other findings indicate that growth monitoring technology has yet to be adapted for use at the village level.

The issue of 'appropriateness' is confounded when the 'user' is inadequately specified, or when there is more than one intended user, as is the case with growth charts which are aimed at both village health workers and mothers. Experience has shown that 'cultural appropriateness' is also an important requirement of primary health technologies (Gopaldas *et al.*, 1975).

Technology must be targeted but not exclusive. In addition to specified 'users' health technologies must also have an identified target group. Growth monitoring is usually applied to children under six years of age. However, its utility to this large group may be at the cost of 'efficiency.' A growing group of professionals feels that it should be targeted only at children under three (Nutrition Foundation, 1984). They argue that this would reduce the load on workers and allow them to concentrate on children who are most at risk of malnutrition, thereby increasing the efficacy of the technology. Alternatives have been suggested for children over three.

However, the application of technology may also err on the side of 'exclusivity,' which would diminish its utility. Field enquiry in the ICDS blocks in Rajasthan and Haryana revealed that, at most sites, only 30-40 per cent of children registered in the programme were actually being weighed: fewer children under three than those between three and six years; more boys than girls; few children who lived far away from the *anganwadi*; and very few from the poorest families. Thus, many of the children 'excluded,' were precisely those who were most in need of growth monitoring. Clearly, while primary health technologies must be targeted for effectiveness, they must also be used in a way that does not exclude the needy.

Programme organisation is a key requirement for efficiency. From the above discussion it is clear that the usefulness of growth monitoring technology is determined in large part by who is weighed, which in turn depends on whether programmes specify a target group within the universe of children under six, whether they are "centre-based" or reach into homes, the extent to which they motivate mothers and children to participate, and so on. These are all aspects of programme design and organisation from which a technology cannot be separated.

Efficacy depends on integration with other service components. An effective growth monitoring system links 'growth charting' to the provision of appropriate health services. At the least, a growth-monitoring programme must aim to detect and deal with the common childhood infections, because growth faltering can be due to infectious illness. The value of growth monitoring clearly increases as the requisite health services are included within a programme. The most common service delivered with growth-monitoring is supplementary nutrition. Other services that may be provided are immunisation, anti-parasitic treatment, oral rehydration therapy, health and nutrition education and family planning. While the integration of these services with growth monitoring often also improves their coverage, their 'supply' is as critical to the success of growth monitoring as the supply of inputs for growth monitoring itself!

In the ICDS scheme, village-level *anganwadi* workers are entrusted with simple prophylactic treatments such as Vitamin A, iron-folic acid, deworming tablets and oral rehydration salts to back up their growth monitoring activities. Besides giving out these and the food supplements that are central to the programme, workers are expected to counsel mothers on child care and refer children in need to the next-level paramedical worker, the ANM. In practice, however, workers tend to link growth monitoring primarily to the provision of food

supplements. Although they occasionally trace weight loss to illness and 'follow-up' by instructing mothers in appropriate care and/or notifying the paramedic to examine a child, these attempts are usually half-hearted, and so the effectiveness of this multifaceted technology is diminished.

Other extant growth-monitoring programmes do not have built-in arrangements for follow-up health activities—or even down-play the need for them. For example, the Tamil Nadu Integrated Nutrition Programme, recommends a search for infection only if a child fails to thrive after three months of nutritional supplementation (Government of Tamil Nadu, 1979). The possible role of health interventions is de-emphasised because the programme is primarily a nutrition supplementation scheme. While growth-monitoring technology is intended as a basis for health care, in 'vertical' programmes such as this one obvious linkages are neglected.

In sum, while growth monitoring must be integrated horizontally and vertically with other health services to be truly useful, the implementation of health interventions is stymied by a lack of adequate training of workers, their time constraints, improper programme design, or other factors. A view of technology as an 'end' rather than a 'means' may be the basic cause of this problem (see Gopalan and Chatterjee, 1985).

Technology must be evaluated to determine effectiveness. The number and complexity of requirements described suggest that the likelihood of proper conditions obtaining for the dissemination of technology is small. This highlights the need to evaluate the performance of technologies within a given context, and to identify factors that may be constraining their proper use. The likelihood of evaluation results being used to improve a technology or a programme of which it is part is enhanced by built-in monitoring. Thus, evaluation must be part and parcel of efforts to spread a technology rather than an after-thought—for scientific, social and political reasons.

An important aspect of evaluation relates to the "tradeoffs" a health system makes to use a particular technology, and its relative cost-effectiveness. As primary health technologies are usually relegated to basic health workers whose time is not costed by the official health system, they are often not seen in

this light. Where a health system has to attend to a wide spectrum of significant health problems with severe constraints of manpower and monetary and material resources, a technology must be able to provide direct benefits to health which justify any financial and manpower resources used.

One approach to evaluating a technology is to ask whether what is achieved by it could be achieved without it. In the case of growth monitoring, achievements depend on growth measurements being taken at regular intervals on a large proportion of children. However, examination of records kept by *anganwadi* workers in the ICDS blocks visited showed low coverage of their target populations, despite a high proportion of workers' time spent either on weighing children or motivating mothers to bring children to weighing sessions. Little time was actually spent on follow-up and, consequently, "coverage" of the target population with successive steps in the application of the technology decreased, so that, eventually, little was achieved by it. Had this time been spent by workers on the education of mothers about child feeding and health, comparable results may have been achieved, calling into question the benefits of mechanically-applied technology.

Meeting objectives necessitates social organisation. The spread of primary health technologies depends on 'quantitative' and 'qualitative' interactions between 'providers' and 'beneficiaries.' While quantity refers to coverage, quality concerns the ability of providers to imbue in clients a desire for the technology concerned. Both these dimensions are related to the "social organisation" of clients—so that ultimately, the success of a technology comes to depend on this complex factor.

For example, the efficacy of growth monitoring is related to the participation of mothers in a weighing programme (the 'quantity' of interactions) and to their 'education' in its use and utility ('qualitative' interaction). Experience has shown that, besides being constrained by competing demands on their time, mothers' involvement in growth monitoring programmes is hampered by the lack of 'demand.' One approach to overcoming this has been to offer incentives (such as food supplements) to mothers to bring their children for weighing and other health services. Some programmes have been successful in

overcoming the lack of participation by using social organisations such as Women's Clubs and Farmer's Clubs for the delivery of services including growth-monitoring (Arole, 1984).

'Demand creation' is also sought to be achieved through individual education and motivation of clients. It is believed that if mothers observe or participate in the processes of weighing and plotting, they can be made aware of the importance of weight gain and be encouraged to improve their child's weight by following advice given by the health worker (Rohde *et al.*, 1975). However, it was observed in the ICDS centres that the majority of mothers were not interested in weighing their children because they could not comprehend the relationship of weight to their child's health. Thus, the technology was not 'accessible' to the majority of clients, and efforts to spread it would have to concentrate on breaking the cycle of 'no knowledge, low demand.'

In summary, the dissemination of primary health technologies has both supply- and demand-side requirements. The chief ones that have emerged from a study of one technology, growth monitoring, have been described—supply and maintenance logistics, manpower training and deployment, appropriateness and targeting of the technology, programme organisation, service integration, evaluation, and social organisation/client education. These needs most likely apply to other basic health technologies. In addition there may be other requirements that are more technology-specific!

Attributes of Primary Health Technologies

Primary health technologies also appear to have certain attributes which bear remembering when programmes are designed around them. A few of these are discussed below.

Inherent limitations. In our example, growth charts, weight-for-age measurements are used to assess nutritional status. They are, thus, predicated on accurate knowledge of age. A wrong estimate of age can result in a child being considered better or worse in nutritional status than he actually is, and thus diminish the utility of growth monitoring. However, it is not easy to obtain the correct ages of children in illiterate communities lacking birth records, and so the technology is 'inherently limited.' It may, however, be possible to overcome some limitations of a technology by ingenious programme planning and design.

Adaptation and substitution are possible. The need to adapt a technology to specific local situations is fortunately accompanied by a potential to do so. However, adaptation or even substitution, where it is possible, is often difficult. An example is provided by the use of 'indigenous' equipment in growth monitoring.

Village-based growth monitoring programmes call for a weighing scale to be available in every village, but the costs of this are often prohibitive. To overcome this, some investigators have experimented with the use of local market balances (Nutrition Foundation, 1984). However, inappropriate "substitution" may also occur such as platform scales, use of registers instead of growth charts for recording weights, and so on. Thus, although programme guidelines which allow flexibility at the local level are desirable, they must be broached with caution.

Available alternatives. Thus far the discussion of growth monitoring has been limited to growth charts based on weight-for-age measurements. However, the limitations of age data and other problems suggest that alternative "age-independent" methods of monitoring growth would be desirable.

However, although such measures as arm circumference and weight-for-height are available (Shakir, 1978; Nabarro and McNab, 1980), they too have 'inherent' and operational limitations! At the current time, there does not appear to be a growth monitoring technology which adequately fulfills "reliability, feasibility, utility and sensitivity criteria" set by the American Public Health Association (APHA, 1981), a situation which under-scores the need for technologies to be used with full appreciation of their limitations.

Application involves ethical choices. The 'selectivity' that may be an inherent feature of a technology and 'exclusivity' that may emanate from programme design, both point to a fundamental attribute of technologies—their ethical underpinnings. The importance of the characteristic will be underscored by providing

examples of ethical choices in the application of growth monitoring.

As described earlier, there is wide variation in the "normal" anthropometry of any population and so statistical procedures are used to demarcate levels of malnourishment. These demarcations are arbitrary, involving value judgements, and do not have particular physiological significance or "infallible prognostic value" (Gopalan, 1984). Yet, growth monitoring is used to select beneficiaries for specific interventions, in most instances benefits being made available only to a small proportion of children.

For example, in the Tamil Nadu Integrated Nutrition Project nutritional supplements are provided only to those children who are found to be severely malnourished. While this application of growth monitoring technology arises out of the desire of programme designers to improve the cost-benefit ratio of the nutritional supplementation scheme and is based on the finding that severely malnourished children are at much greater risk of mortality than moderately or mildly malnourished children (Chen *et al.*, 1980), it loses sight of the arbitrary nature of the procedures used to grade children into different degrees of malnutrition.

Furthermore, the neglect of children who are moderately and mildly malnourished is a self-defeating strategy which Gopalan (1983a) has termed a "nutritional policy of brinkmanship."

Political implications. That even "simple" health technologies are not free of political implications can be illustrated by growth monitoring. To evaluate nutritional status, a child's growth curve is usually compared with that of a "reference" population. The most extensively-used reference standards are derived from data on Western populations (Stuart and Stevenson, 1959; Tanner *et al.*, 1966; WHO, 1978b) but their appropriateness has been questioned. Some scientists argue that the use of standards based on "developed" populations, or even on the well-nourished in developing countries, sets unachievable goals for less well-off communities, and unnecessarily inflates the malnutrition problem (Eusebio and Nube, 1981). Others maintain that such standards are useful as growth potential is more strongly influenced by environmental factors,

such as nutrition, than by ethnicity (Habicht *et al.*, 1974; Stephenson *et al.*, 1983). Thus, the deliberate adoption of a lower "standard" would defeat the purpose of comparing a child's growth with his actual potential. It may amount to a 'political strategy' to keep less-developed populations at low levels of growth achievement. Similarly, since the manner in which "grades" of malnutrition are demarcated determines the extent of malnutrition in a population, "cut-off" points can be chosen so as to exaggerate or downplay the extent of malnutrition in a population. This is often done, for example, to reduce the numbers of undernourished children to proportions "manageable" within programme resources, "wiping out" malnutrition by a "redefinition of parameters" (Mitra, n.d.)!

Cost constraints. Besides such distortion of technology to fall in with "practical resource constraints," there are, however, "real" cost constraints to the spread of technology. For example, the cost of growth monitoring may be so high as to prohibit its adoption by the health system at the national level. In illustration, one can examine just the cost of the weighing scales necessary. It has been estimated that a capital outlay of Rs. 3 lakhs and an annual recurring expenditure of Rs. 60,000 would be required to provide a single district of one million population with scales (Kumar, 1984). At the national level, an initial expenditure of Rs. 20 crores and an annual recurring expenditure of Rs. 4 crores would be required for the scales alone! Stipends for village level-workers conducting the growth monitoring would amount to Rs. 55 crores per annum. In addition, the costs of growth charts, of training and supervisory inputs would need to be added. These expenditures would be infructuous unless other related services are provided. Thus, growth monitoring alone could consume a considerable proportion of the national health budget (see Chapter 9)! Although equipment may be 'donated' initially if programmes are envisioned on a national scale, external assistance may be counterproductive because 'adaptation' to local needs may be delayed or avoided altogether. Thus, the cost of manufacturing equipment and supplies locally is an important consideration for the long-run dissemination of a technology. In the short term, although a technology may be desirable, the resources it

requires to be usefully operationalised may be impossible to martial.

Conclusions

To assess the capability of the health system to implement primary health care, field experience with a single primary health technology, growth monitoring, has been discussed.

Although a technology may itself be 'simple' (growth monitoring is based only on a paper chart and a weighing scale!), a number of basic requirements must be fulfilled for a technology's potential to be met. Among these are: adequate logistics for the supply and maintenance of "hardware," appropriate training, deployment and supervision of manpower, proper programme organisation including integration with other services, targeted delivery, cultural acceptability, social organisation of clients, and evaluation. Clearly, with this list of requirements any programme could face severe operational difficulties.

Several issues regarding primary health technologies emerge which are discussed below, under 'economic,' 'social' and 'political' heads.

Economic Issues

The major economic issue in health technology is the 'equity' vs. 'efficiency' question (Okun, 1975). Although high-cost technology is clearly seen as 'inequitable,' equity is the most important criterion for basic health technologies, for the major objective of primary health care is to provide a basic level of health to all. On the other hand, efficiency is also important because the spread of simple health technologies must be at the same time "low-cost" and highly "cost-effective."

However, the "low-cost" of primary health technologies has not been adequately established. Considerations of cost must encompass organisational, manpower, logistics and 'hidden' costs besides the direct cost of equipment and supplies. In view of all these costs, 'efficiency' in the application of primary health technologies may be as important as equity. In fact, beyond a point 'quality' considerations might be more

important than 'quantity.' As we have seen in the case of growth monitoring, large-scale applications of a technology may result in a mechanistic and ineffectual approach, while targeting the technology and ensuring additional inputs (e.g. follow-up) may be far more "cost effective."

A given technology will be 'cost-effective' only in particular circumstances, e.g. at a specific level of development of the health service system, for it requires adequate development in order for results to be commensurate with the time, energy and financial resources expended.

This argument contrasts somewhat with that put forward by advocates of the "selective primary health care" approach (Walsh and Warren, 1980). A selective approach to the implementation of primary health care has been suggested on the premise that resources are limited, and hence that "total" primary health care is unattainable. This would mean that a large number of people would continue to be excluded from health care unless the 'prescriptions' are reduced to feasible proportions. Although growth monitoring is not included among the 'selective' primary health care interventions advocated, immunisation, treatment of acute conditions (eg. malaria), oral rehydration, the encouragement of breastfeeding, and other MCH, family planning and health education measures are listed. These interventions are largely aimed at young children and women in the childbearing years—the same target group that is the focus of growth monitoring operations. It has been proposed that these services can be provided sporadically (once every 4-6 months) through mobile health units. The cost "per patient contact" of such a strategy has been estimated as about one-fourth the cost of "total PHC" per caput.

However, this proposal overlooks several field realities that obtain in India (and most probably in other developing countries) from the 'mundane' (eg. the inaccessibility of many villages by road transport but the existence (at least in theory) of village-level health personnel) to the profound—the attitudes of health service providers and the need for constant interactions between providers and clients. Even the implementation of 'selective' primary health technologies will require health services to be substantially upgraded. This will necessitate large resources.

Social Issues

The 'economic' issue of the cost of health technologies is inextricably linked to the social issue of their 'acceptability.' Primary health technologies are 'demand-oriented' and so clients' perceptions, attitudes and practices determine their acceptance, use and effectiveness. 'Cultural appropriateness' is of prime importance to the spread of a health technology. Unless appropriate, the technology will not be sought after by clients, it will only be perceived as having high opportunity costs. Even strenuous efforts by health workers will then be infructuous, and the technology will become 'costly.'

One aspect of 'cultural appropriateness' is the fit between the technology and the delivery system. Like pieces of a jigsaw puzzle, both these must interlock with the social milieu. It is the system delivering the technology that must adapt it to local conditions, and itself be amenable to changing in tune with local requirements. Although concern is often expressed about the extent to which communities can absorb a technology, it is more important to ask whether a given technology and the health infrastructure promoting it can adapt to community needs and constraints.

Political Issues

Finally, one can examine a few 'political' issues, not unrelated to the economic and social ones discussed above. The most important is the issue of 'control' over technologies. Even though primary health technologies are intended to be spread to the population at large, the medical profession still exercises technical control over them, and the bureaucracy controls their administration. There have been few attempts at 'decontrol.' For example, while mothers are urged to bring their children to growth monitoring programmes, they are rarely taught how to conduct the weighing and charting themselves, much less to apply the findings to benefit their children. For that matter, even basic health workers are not taught the latter properly.

A related issue is the possibility that the aims of a technology may be subverted. Instead of "early detection" of child illness, growth monitoring can be used simply to select

beneficiaries for feeding, or to collect information on mothers and children for family planning purposes. "Evaluation" of a technology implies assessing whether it is being used to achieve stated objectives. It is perhaps equally important to assess whether it is essential for doing so.

A third 'political' issue arises from the question: for whom is the technology intended? It is necessary to examine whether a technology really benefits the target group—or some other group, eg. programme designers and administrators. Health technologies are not necessarily egalitarian in their consequences and so, if reducing differentials in health is an objective of policy, their application must be directed to benefit those most in need.

It is crucial to remember that health technologies do not function independently of the social, economic and political systems of which they are part.

CHAPTER 8

LIFE WITHOUT FOOD?— "HEALTH" POLICY RE-EXAMINED

While public policies over the past two centuries have provided the ingredients for Kerala's impressive mortality and fertility declines, they have failed to improve nutritional status in that state. Policies enacted with equity considerations brought about the spread of education and health services, social integration, improvements in the status of women, political participation and other factors that have contributed to the low birth, death and infant mortality rates and high life expectancy of Kerala. But inattention to growth has resulted in inadequate food production, low incomes and marked seasonality of employment which operate to perpetuate poor nutrition levels. While the major paradox has been seen as one of 'high social development despite economic backwardness,' there is also, clearly, a paradox within the microcosm of health. Mortality and fertility rates are low, but malnutrition and morbidity are high. One might well ask: How can there be "life without food"? Given current population pressures and economic uncertainty, declining trends in nutrition may be expected. There may also be indications that Kerala's health status, judged by indicators other than mortality rates, may be worsening. What then is the future of Kerala's "health"? What are the lessons for health policy elsewhere?

The 'Major' Paradox

The people of Kerala apparently enjoy good health despite their poverty. The state's health status is usually judged by its favourable demographic indices. Its overall death rate and infant mortality rate are the lowest in country at 7.0 per 1000 people and 43 per 1000 live births, respectively (CBHI, 1983). At over 65 years, its average life expectancy at birth is comparable to that of Europe or North America, and exceeds that of most countries in Africa or Asia. Within India, it is the State with the highest sex ratio (1032 females per 1000 males)—indeed, the only one where there are more females than males; the highest female literacy level (65.7 per cent), and the lowest birth rate (26.8 births per 1000 population), excluding some of the Union Territories. On the other hand, the per capita income of Kerala is much lower than the national average (Rs. 1448 compared with Rs. 1750 in 1981-82), which indicates the overall poverty of the state.

Prevailing Explanatory Theories

There are several explanatory hypotheses for this anomalous situation. Nair (1974) first suggested that the extension of primary health centres and public health measures in the state led to declines in infant and child mortality rates in the 1950s and subsequently to fertility declines in the 1960s. On the other hand, Panikar (1975) pointed out that mortality rates had already declined substantially prior to the 1950s and proposed that public health measures, such as sanitation, introduced by the rulers of Travancore and Cochin in the 19th and 20th centuries, were the key to reduced mortality. He argued that the relative contribution of 'modern' health facilities was small. An 'all-encompassing' hypothesis was provided by Ratcliffe (1977) who saw change in Kerala's demography as the result of broader socio-economic and political developments. First, he pointed out that the State's pursuit of land reform enabled it to achieve more equitable distribution despite low average income, in contrast to the rest of India. In addition, he proposed that the availability of wage employment and high wage rates helped landless agricultural labourers as well

as workers in the industrial and service sectors. Better wages, better terms and conditions of work, and welfare were available. In sum, a greater proportion of the labour force participated actively and productively in the economy—and therefore shared in the overall distribution of income, despite reported high rates of unemployment. (The latter situation, explained Ratcliffe, obtained because there was less disguised unemployment and underemployment in Kerala than elsewhere in India.)

Second, Ratcliffe extolled Kerala's education policies, which emphasised primary education, and made allocations of educational expenditures in accordance with this priority. As a result, primary education was almost universal and literacy widespread. Kerala had provided this universal education despite its shortage of resources, debunking the common assumption that the two are incompatible. Education of women and of lower castes was a key factor enhancing their status and social mobility. Education increased participation in economic activity and thus contributed to income distribution. The education of women was also associated with a higher age at marriage among women in Kerala compared with the rest of India. Third, Ratcliffe cited the high level of political consciousness in the state as an important factor. He attributed the political awareness to the influence of the CPI during the 1950s. (However, as we shall see below, organisation of lower castes and pressure for legislative changes which had an impact on health, began long before the CPI came to power, although they undoubtedly continued to flourish under CPI rule and influence.)

Discussing the role of the health services, Ratcliffe asserted that education and political participation had engendered knowledge of individual rights, including the right to health services. This, in turn, created a popular climate of "demand" within Kerala, and both the media and the vote were used by the people "to force the system to be responsive to their demands." Wider constituencies led health resources to be distributed in a more equitable fashion, and the resultant services were better utilised. This happened despite lower overall per capita expenditure on health in the State. Ratcliffe considered unlikely the hypothesis put forward by Nair (1974)

that Kerala's fertility declined in response to mortality declines and health service usage. He contended that both mortality and fertility in Kerala declined in response to improved levels of social development (though fertility decline may have lagged slightly behind mortality).

In fact, Ratcliffe went on to assert that more equitable distributions of political power, resources, goods and services, were responsible for mortality and fertility declines. He associated high labour force participation and more equitable distribution of wealth with Kerala's reduced fertility, and suggested that other forms of social welfare and security in Kerala, as well as the enforcement of child labour laws, reduced the "desire for children," thus also contributing to decreased fertility.

Ratcliffe also claimed that higher incomes and productivity and education meant improved nutritional intakes. He suggested that although average per capita calorie intake may be low, the distribution of calories had been conducive to better nutritional status. In sum, he saw the factors of income and resource distribution, political participation and education as acting synergistically to enable Kerala to overcome its handicaps of high population density and a low resource base, and provide its population a better standard of living.

History of Health Development

However, Ratcliffe's analysis was largely confined to the post-1950 period; it thereby ignored historical developments in the various fields discussed, particularly those in the health services. The historical context is important because the health effects of earlier social and political developments in Kerala were most profound. Yechouron (1980) has provided a description of the development of public health in Kerala in the context of social and political change. She has suggested that social change brought about "from below" was instrumental in modifying the demographic picture. In the nineteenth and early twentieth centuries, the caste system in Travancore and Cochin was already breaking down under the influence of Christian missionaries who fostered the lower castes and improved their conditions through education and organisation. The breakdown of the caste system went hand in hand with the

spread of education. The access of lower castes to government schools, which included health examinations and health education, helped to improve their health status. Enhanced political participation on the part of lower castes also led to governmental response to public health and medical needs. By the second half of the nineteenth century, the Rajas of Cochin and Travancore began to build hospitals and dispensaries which were accessible to all, and they extended public works, including sanitation.

Thus, a favourable situation with regard to health facilities obtained by the mid-nineteenth century with the widespread and rapid construction of both public and private (largely missionary) health centres. The latter concentrated on providing services to the poor and to lower castes, and on training local midwives and nurses to cater to these communities. Free from the certification requirements instituted by the British in other parts of India, such training provided an important personnel base.

In the face of public demand, government commitment to the provision of health facilities was also strong and expenditure considerable. While the development of medical facilities elsewhere in the country was largely confined to urban areas, in Kerala they were spatially distributed throughout the rural areas, ensuring an access which is unparalleled in any other part of the country. "Mobile clinics" became an early feature of medical services because of good road networks.

These public hospitals and health centres were well-equipped and also fostered the training and deployment of women health workers at all levels. Furthermore, a "grant-in-aid" system offered by the government encouraged the development of private institutions and of indigenous medical institutions. Unusually, there was coordination between private medical institutions and the government's public health department in the areas, for example, of training and vaccination.

In view of this early and rapid spread of medical facilities, Panikar's (1975) assertion that they played a minor role in bringing about demographic change cannot be totally accepted. Yechouron's (1980) historical survey suggests that the development of medical institutions took place from the 1880s onwards, concurrent with an emphasis on prevention and public health. Many medical institutions emphasised improved

midwifery techniques. *Dai* training had begun early in both Cochin and Travancore. These factors are quite likely to have contributed to an early drop in infant and maternal mortality rates in the region.

Political commitment to health was also exemplified by the support given to vaccination programmes by the Rajas of Travancore from the 1860s onward. By the end of the 1880s, vaccination had become a major programme and sanitation work had begun in both urban and rural areas. A cholera epidemic in the 1890s instigated the establishment of a Sanitation Department and epidemic control measures were installed. The improvement of water supplies, through the digging and cleaning of wells, was a first step.

A Public Health Department was created in 1933 and concerned itself with other endemic diseases such as hookworm and filaria. Research in transmission and treatment began and control measures instituted. Public health education was emphasised, including the prevention of endemic diseases. In 1934, a state-wide vaccination campaign began which rapidly covered over 70 per cent of the state's population. Efforts to improve water supply and provide drainage continued to spread through larger towns and villages. The importance of clean water was recognised and both governmental and popular commitment to it were strong. The government was willing to spend large amounts of money and the people were willing to contribute both finances and labour for these programmes. It is most significant that vaccination and sanitation and water supply were the first major public health programmes instituted in the area and that these were accompanied by increasing education, school health, and political participation.

Around this time, a rural health unit was established with assistance from the Rockefeller Foundation to develop a rural health service model. Here, maternal and child health were stressed. The unit was a training ground for physicians, public health nurses and other health personnel. Within ten years infant mortality in the health unit area was reduced to 83 per 1000, in contrast with the prevailing (1938) all-India figure of 207, and the Travancore-Cochin-Malabar rate of 173. (However, whether this lower rate is attributable solely to the health

programme remains an uncertain conclusion.) Although the rural health model programme was intended to be extended through the state, this was not possible because the effort was expensive, and there was both a shortage of funds and of trained medical personnel. It is interesting that Kerala introduced such a "model" experiment as early as 1928, and that this failed then for much the same reasons as model efforts fail today! Nevertheless in 1936, a widespread Maternal and Child Health programme was established in Travancore, and taluk-level health units were started to provide basic health services. The MCH centres provided intra- and post-natal care, domiciliary visits, hygiene and child care education, and even supplementary feeding.

The impact of people' awareness, organisation, participation and contributions, brought about by education and democratisation, must not be underestimated in the situations of both Tranvancore and Cochin, where there was a parallel development in health. As Ratcliffe noted (1978) the people of Kerala are aware of their rights and use demonstrations, newspapers and elections to "force the system to be responsive to their demands." As a result, the health system has a relationship with its clients that is favourable to health objectives. The process of "health awakening" has, however, taken place over more than a century! The major participants in this process have been women who exercised influence on the health and welfare of their families and succeeded in bringing about 'affirmative action' in the sphere of public health institutions.

The Role of Education and Women's Status

Besides the 'spin-off' benefits of higher literacy for health, education was also used effectively to directly further health and hygiene. The Travancore Health Code of 1909 required that all school students be vaccinated before entrance and every five years thereafter, and that all schools be inspected by the Medical and Sanitary and Public Works Departments. It allowed domestic science and hygiene to be taken by women in place of geography and history, and provided for teachers to be trained in hygiene, which was later included in all government

school textbooks. (Since 1945, hygiene has been taught as a separate required course in all primary and secondary schools). Although initially girls and boys studied in the same schools, the number of girls' schools was increased and domestic science and nursing became compulsory subjects. This could be followed by practical nursing at local hospitals. The crucial point is that education of women in general terms as well as specifically in health care went hand in hand. At the same time, women's relatively higher position within their homes ensured that they could utilise their school learning.

In fact, the favourable demographic situation of Kerala owes much to the high status of women, which emanates from the matrilineality of Kerala society (Krishna Iyer, 1970). Under the predominant *marumakkathaya* system in Kerala (Gulati, 1976) women enjoy the right to inheritance and residence, and the right to divorce and remarry if widowed. Because of their influence and position of power within the family, they were educated. Thus, they became aware of influences on health, and even took up professions connected with health; working as doctors, nurses and *dais* in hospitals. They were also inducted into other health cadres, such as vaccinators, and in all these roles ventured into communities which had little or no access to institutionalised health services. The influence of Christian missionaries on the provision and propagation of female education, as well as on the entry of females into the health professions was undoubtedly strong.

The high status of women in Kerala is borne out by the relatively more favourable female demographic indices (Government of Kerala, 1984). The mean age at first marriage has always been higher in Kerala than elsewhere in India (Gulati, 1976). For example, in the 1901-10 decade, the mean age in Kerala was 17.1 years while the corresponding all-India age was 13.2 years. In 1981, the ages for Kerala and India were 21.9 and 18.7 years, respectively. In addition, the proportion of women remaining unmarried in Kerala is much higher than the rest of India. Although these nuptial trends are due in part to very different interpretations of religious and social norms than those enjoined elsewhere in the country, higher rates of female education and participation in the labour force obviously also play major roles. All these factors also exert influences on the

mortality rates of Kerala, reducing the differentials between male and female mortality and decreasing infant and child mortality rates. Female life expectancy is higher than male life expectancy in the state, a situation that results in a sex ratio favouring women.

The importance of the social and political climate that prevailed in Travancore-Cochin to the development of health is easily recognised when that region is compared with the area of Malabar, which was under British rule as part of the Madras Presidency. (The two areas were merged to form the state of Kerala only in 1956.) Although the British had codified public health norms for areas under their rule, these proposals remained largely unimplemented, in contrast to the concrete activities of the rulers of Travancore and Cochin. Education and social organisation (eg. of lower caste groups) remained underdeveloped in the Madras Presidency. The status of women was also inferior in the Malabar area compared with Southern Kerala (Gulati, 1976). Malabar had (and still has) a higher proportion of Muslims, whose women remained in purdah, were not educated, and were married early. To this day, the districts that comprise the region of Malabar remain behind those of the rest of Kerala in terms of female literacy.

Disaggregating Social, Economic and Political Factors

The role of social factors in Kerala's mortality and fertility declines is highlighted in Nag's comparisons of that State with West Bengal (1981, 1983). Census data show that infant mortality rates and birth rates were higher in Kerala than in West Bengal until the 1941-50 decade. Nag's comparative analysis focuses on post-1950 developments. Since the 1950s and particularly in the 1970s Kerala has fared better than West Bengal on these indices. To explain the more rapid declines in fertility and mortality in Kerala than in West Bengal during this period Nag examined various socio-economic parameters, as well as education and health factors.

First, he showed that West Bengal's per capita income is higher than Kerala's and that there is also greater inequality in the distribution of rural household incomes in Kerala. Although rural Keralite households apparently had larger

average total assets than rural households in West Bengal, these were apparently also inequitably distributed. Citing a study by Ahluwalia, Nag showed that the inequality of rural per capita consumption expenditure was greater in Kerala than West Bengal. Using data from the National Institute of Nutrition and the National Sample Survey Organisation he pointed to the higher nutrition levels of West Bengal compared with Kerala. Low income groups in Kerala had the lowest per capita calorie and protein intakes among 9 States surveyed in 1972-74, while high income groups in Kerala had the highest per capita intakes, suggesting markedly skewed distribution of food consumption. Looking beyond rural areas, Nag showed that urbanisation and industrialisation were higher in West Bengal than in Kerala, and so did not explain the latter States 'better' demography. Thus, Nag contended that neither the economic "standard of living" nor equitable distribution of food, explained Kerala's more favourable demographic picture, in contrast with Ratcliffe's (1978) earlier claim. Despite land reform and minimum wages, the situation of poorer groups in Kerala was worse than of those in West Bengal.

Nag then compared health and educational facilities in the two States. At first look, medical and public health facilities appeared to be 'balanced.' West Bengal had a higher doctor: population ratio, while Kerala had a higher nurse: population ratio. However, West Bengal's doctors were concentrated in urban areas, while Kerala had more primary health centres in rural areas (163 centres in 144 blocks in Kerala in 1977-78, compared with 316 centres in 335 blocks in West Bengal). By 1973, Kerala's PHCs had their full complement of doctors, but there was a "10 per cent vacancy" in West Bengal. Furthermore, in Kerala in 1977, there were 11 subcentres for each PHC, compared with 6.2 in West Bengal. The catchment areas of subcentres in Kerala were smaller and good roads and transportation facilities made them more accessible. Thus, Kerala had a higher proportion of institutionalised births and deaths in rural areas than did West Bengal. The governmental per capita expenditure on health in Kerala was slightly higher than that in West Bengal.

Nag also drew attention to the early introduction of public

health measures, including sanitation and immunisation, in Travancore-Cochin during the nineteenth century, and to the absence of such measures in West Bengal. Although the increasing differential in mortality between the two states since the early 1970s could be explained by different causes of death (because Cause of Death data are deficient in both states—indeed, all over India), Nag proposed some environmental and hygiene factors that may be "more favourable to health" in Kerala. According to him, the people of Kerala have a "tradition of cleanliness" and boil their drinking water, while West Bengal's water tanks are ill-maintained and unhygienic. Thus, Nag asserted that better underlying conditions and greater utilisation of preventive and curative health facilities may be major determinants of the mortality differential between the two States. He also suggested that the greater availability of family planning services in Kerala had been responsible for its reduced fertility.

Education also played a significant role in Kerala's better status compared with West Bengal. Kerala's history of widespread basic education in the vernacular, contrasted with Bengali education which was elitist and oriented towards secondary English-medium education. There was less primary education in West Bengal and less interest in the education of women. Kerala had higher current educational expenditures than West Bengal, particularly on primary education. Kerala's high literacy rate, and particularly the higher literacy of females compared with West Bengal, favoured reduced mortality and fertility in the former State. Higher literacy increased awareness of health facilities, and consequently their use. In particular, Maternal and Child Health services were widely used by women. Higher literacy also favoured political participation, especially of the poor, and demand for health care. Demand for health services was at a far lower level in West Bengal, reflecting lower political awareness and participation (despite the Left movement in this state as in Kerala), Thus, political processes, too, seem to have favoured demographic change in Kerala more than in West Bengal.

On the whole, Nag concluded that 'equity' in health and education facilities had been a greater influence on the decline of mortality and fertility rates in Kerala than had income and asset (e.g. land) distribution. In keeping with this, he suggested that elsewhere in India, mortality and fertility declines could be brought about through greater equity in health and education services (which is politically easier to achieve) and need not await the redistribution of income or land reform (which will be politically resisted).

While both Ratcliffe's (1977, 1978) and Nag's (1981, 1983) analyses cover the gamut of factors possibly indicted in Kerala's demographic transition, they are significantly divergent from one another. Ratcliffe stresses the equitable distribution of economic resources as the major cause of the state's demographic change, while Nag emphasizes the 'distribution' of social services, negating the role of economic factors. However, underlying both sets of factors would seem to be 'political processes.'

Poverty Recapitulated

Although Ratcliffe maintained that Kerala's redistributive policies *increased* incomes which were most important for the demographic transition, Zachariah and Kurup (1984) have suggested that a degree of economic *deprivation* resulted from land reform which was at least partially responsible for inducing the fertility decline. The process of land redistribution changed "the cost of children relative to the family's income." Those who lost land, lost income, and so began to place emphasis on having fewer "higher quality" children. On the other hand, those who gained land did not gain enough to desire more children. Simultaneously, higher wages brought about by minimum wage legislation resulted in more unemployment. This decreased the potential of child labour and enforcement of child labour laws eliminated children's economic contributions. Minimum wage legislation also increased the earnings of women, so that the "opportunity cost" of child-bearing rose. And so, while Ratcliffe (1978) and Nair (1974) had earlier postulated that fertility decline in Kerala had little to do with the family planning programme, Zachariah and Kurup (1984) and others (Kurup and Cecil, 1976) held that the programme was most important for the reduction of the birth rate. That is, the availability of family planning services made it possible for the "desire" to control

family size to be turned into reality, (although there is still "unmet demand" for family planning services in Kerala (Zachariah, 1981).

Zachariah and Kurup saw the decline in fertility as the result of "a systematic erosion of the economic significance of the inherited characteristics of a person (religion, caste, family, etc.) and the simultaneous enhancement of the economic significance of personal attributes (education, health, etc.)." Education was perceived as ensuring social and economic mobility, and thus a greater desire to 'invest' in children's education ensued. A similar thesis has recently also been put forward by Panikar (1984a).

Zachariah (1981) had earlier concluded that "The principal policy interventions designed to encourage couples to desire smaller families are health and education," and like Nag (1981) suggested that other states in India should take similar measures to reduce infant and child mortality and increase female education. He stipulated that while this could be done by providing the means to earn higher incomes (*eg.* minimum wages) to 'purchase' better health and education, it could also be brought about by reducing the 'cost' of education and health care to the poor *i.e.* making these more accessible. More efficient delivery of family planning services could also bring about fertility declines elsewhere.

Again in contrast to Ratcliffe's theory of 'diminished' poverty, Mencher (1980, 1982) considered the decline in fertility among Kerala's agricultural labourers a reflection of their *greater* poverty. Mencher, an anthropologist, examined the situation of agricultural labourers to determine to what extent their life conditions had improved with changes in Kerala's political economy (1980). Agricultural labourers constituted over one-third of all rural workers in Kerala, and a higher proportion of workers in the areas she studied. There were about twice as many agricultural labourers as cultivators. Mencher explored their health, nutrition, fertility, education, literacy, employment situation, access to other public facilities, and land.

With regard to fertility, Mencher supported the view that much of the decline in Kerala is accounted for by the decreased

fertility of this group, but she argued that the main reason for fewer children among agricultural labourers was that it was no longer advantageous to have more, due to pressures on employment. Employment opportunities had decreased because of an increase in the population of landless labourers, depression in industry, technological displacement of workers from industry and other occupations (such as forests), and a decreased demand for labour on the part of landowners. More children would mean more household expenditure, which may not be offset by their future earnings because of high unemployment. Thus, the labourers chose to have fewer children. Mencher pointed out that, in any case, labourer households traditionally had fewer children than landowning ones, perhaps because of the higher prevalence of joint families in the former group. Because of the lack of employment, children were not required much for domestic labour and so they were sent to school. "Sending a child to school need not be an indication of lessening poverty." In fact, because there was less employment for children and parental incomes were limited, parents preferred to send children to school where they got a midday meal at least. According to Mencher (1982), although education was readily available it had not meant better employment for agricultural labourers. In the face of declining work opportunities, the minimum wage may have helped to prevent the poor from slipping to lower levels of poverty, but it has been insufficient to raise them above the poverty line. There has been little or no improvement in the quality of their lives.

Discussing medical care, Mencher stated that while it was, indeed, available and helped to avert many deaths, it was "insufficient to eliminate poverty." Although chances of children surviving were indeed higher than earlier, there was still a higher incidence of child death among the poorer groups than among landowners. "The reason why people are living longer and why child deaths have declined relates as much to politicisation of the people as to public policy . . . .There is no question that politicisation of people in Kerala has played a major part in affecting (improving) people's health. . . . In Kerala, if a PHC was unmanned for a few days, there would be a massive demonstration at the nearest collectorate led by local leftists, who would demand to be given what they knew

they were entitled to. This has had the effect of making health care much more readily available for the poor in Kerala." Mencher noted that (in 1970-71) doctors in Kerala preferred working at Primary Health Centres to engaging in private practice. They did not regard a PHC as a "dead-end job," and were usually to be found hard at work with people waiting in queues for treatment.

In sum, Mencher stipulated that Kerala's high levels of literacy, and low levels of mortality and fertility are not necessarily indicative of a reduction in poverty or improvement in the quality of life. This facile association is usually drawn because of Western experience with declines in mortality and fertility, which ensued from improvements in the economic standard of living. While economic improvements may, indeed, have led to lower mortality and fertility in the West, this can be disputed by inter-State analyses in India (such as Nag's, 1981 and 1983, or Gopalan's, 1983b). And further, the converse of this proposition—that improved mortality and fertility rates are the result of better living conditions—seems definitely untrue in the case of Kerala.

Having thus explored the major paradox of 'demographic transition despite economic backwardness,' the stage is set for an examination of the internal inconsistency or 'minor' paradox: "life" (*i.e.* low mortality, high life expectancy) without "food" (low nutrition). The rosy picture of health development painted for Kerala with demographic brushes is confused by details of the State's health and nutrition status. But mortality is inevitably a reflection of morbidity, and so health factors and trends are important for long-term prospects.

Health and Nutrition Status

Analysts of Kerala's demographic transition have largely focused on fertility and, in a few instances, on mortality as the 'dependent variables.' While nutrition has been considered in terms of food consumption as a measure of economic development (*i.e.* an independent variable), nutritional status (the outcome or dependent variable) has rarely been examined. Nor have other indicators of morbidity been used. The

exception to this is the work of Panikar and his colleagues which, fortunately, sheds proper light on the health and nutrition status of Kerala. A few observations by Mencher are also useful.

Initially, Panikar (1979) had also confined his examination of Kerala's health status to indicators such as the overall death rate, age-specific death rates, including the infant mortality rate, and life expectancy, and pointed out the state's advantageous position compared with other states. He also showed that rural-urban differentials in Kerala were less than in other parts of the country (*e.g.* 1.2 points in the death rate per 1000 population compared with an all-India difference of 7.5 per 1000 in 1978). Kerala had successfully lowered the death rate of her rural population and of children in the vulnerable years between 0 and 5.

However, using Cause of Death data, Panikar (1979) pointed out that the major causes of disease and death were malnutrition, poor water supply, and lack of environmental sanitation, although "the success of Kerala seems to lie to a large extent in having given equal emphasis to preventive and promotive measures as to curative medicine." The spatial distribution of health facilities allowed preventive health care to be delivered to the population. Immunisation, clean water, sanitation, nutrition, and health education were among those measures. Immunisation coverage was high, and contributed to lower mortality. Better health awareness due to higher education levels led to better utilisation of health facilities and higher 'institutionalisation' of births, resulting in lower infant and maternal mortality. However, despite Kerala's long history of work in sanitation, water supply, disease control, and public education, Panikar pointed out that in 1978 "the proportion of the population covered by protected water supply and sewage in the rural parts of Kerala remains rather low."

Morbidity

More recently, Panikar and Soman (1984) have provided a detailed account of the health situation of Kerala and of the health service system. Besides low levels of overall mortality

and infant mortality, rural-urban and male-female differences in these rates are small, and life expectation at birth is higher for females than males, a unique situation among the States of India. However, the authors have characterised the morbidity profile as "a mixture of the diseases of poverty and diseases of affluence." Among the latter are included 'diseases of aging,' which are manifestly important because Kerala's population has a somewhat 'older' pyramidal structure than the country at large because of its lower birth rate and higher life expectancy.

These separate disease profiles are of some interest. At rural primary health centres, respiratory infections predominate. They particularly affect overcrowded coastal village populations living in the hot and humid tropical climate. Diarrhoeal diseases are the next important cause of morbidity due to the lack of sanitation facilities and scarcity of drinking water. They were, again, more prevalent in coastal villages, and also exhibited seasonal dimensions. Skin infections were common because of poor hygiene. Other data showed that intestinal parasitism was rampant, 90 per cent of the population being affected by one form or another (or multiple parasites).

Hospital data on child out-patients from an urban area (Trivandrum) revealed the importance of communicable diseases such as diphtheria, whooping cough, measles and tuberculosis, in addition to other respiratory and gastrointestinal infections. While a decline in the prevalence of communicable diseases apparently occurred during the 1970s, due in part to the success of vaccination programmes and in part to the availability of health facilities, respiratory and gastroenteric infections and poliomyelitis maintained high levels. The first two groups of diseases were also seen frequently among adults admitted to another urban hospital. Thus, diseases related to poor environments—lack of sanitation, impure drinking water and overcrowding—were most significant among the people of Kerala. Malaria had also increased significantly over the period 1963-68 to 1973-76, suggesting a decline in vector-control programmes.

Among "diseases of the affluent," gastrointestinal problems and cancers were prominent and cardiovascular disease and 'accidents and poisoning' were on the rise, reflecting 'modern' life-styles among the urban affluent sections of Kerala's

population. Some differences in the pattern of diseases emerged from a comparison of the records of a free public hospital and a paying private hospital. However, as both were urban hospital-based data sets, they were not representative of the prevalence of such diseases among the population at large. The "diseases of poverty" (infections, including TB and leprosy, infestations and deficiency diseases) clearly emerged as the most significant class, especially in rural areas. Panikar and Soman concluded that the high rate of utilisation of medical facilities in the state reflected existing high morbidity rates superimposed by a consciousness of medical care. One can extrapolate that 'health awareness' even in Kerala relates more to seeking cure than to preventing disease. The prevalence of poor environmental conditions favours the spread of infectious disease so that morbidity is high. Deaths can, however, be averted because medical care is close at hand.

Nutritional Status

Panikar and Soman (1984) have also collated information on nutritional status, judged by the growth achievements of Keralite children, and the prevalence of nutritional deficiency diseases. Growth measurements dating back to 1936 are reported and show considerable stunting and underweight among Keralite school children in both the Travancore and Malabar regions. Later studies between 1943 and 1976 substantiated the prevalence of growth retardation among children. On the other hand, periodic studies of birth weights carried out between 1940 and 1978 show remarkable consistency over time and acceptable *average* values.

More recent growth information is available from the annual survey reports of the National Nutrition Monitoring Bureau (NNMB, 1976, 1977, 1978, 1979, 1981). Between 1975 and 1979, about 38 per cent of children in the pre-school age group were found to be moderately or severely malnourished in Kerala. Although other states surveyed had higher levels of undernourishment, this proportion is already large. Significantly, percentages of "normally" nourished children were no different in Kerala than, say, in U.P. The prevalence of nutritional deficiency diseases such as anaemia was also exceedingly high among children, particularly those of coastal villages.

A plethora of data is available on food consumption in Kerala, beginning with the 1940s (Panikar and Soman, 1984; Soman, 1982; Panikar, 1978, 1980; Kumar, 1979; UN, 1975). Without exception, they show that Kerala's population consumed substantially less on an average than the "recommended" per capita intake of calories. Among the poorest groups the shortfall was more than 50 per cent in some years, and it was as much as 30 per cent among middle to better-off groups. Time-series data between 1950 and 1970 for food consumption in rural areas suggest energy deficits of 15 to 25 per cent. A decline during the 1960s is also evident. A survey in 1971 showed a deficit in average calorie intake of about 20 per cent in both urban and rural areas (with very little difference between them). While the poor consumed roughly 25 per cent less than "recommended," even the rich consumed 5-10 per cent less.

In the 1960s and 70s the National Sample Survey consistently showed that the average per capita calorie intake in Kerala was the lowest in the country, considerably below the national average. For example, in the 1971-72 (26th) Round of the NSS (1975), the daily calorie intake per consumer unit was lowest in Kerala at 2023 in rural areas and 2103 in urban areas compared with the highest levels in rural Punjab (3711) and urban Rajasthan (3006), respectively, and the recommended daily intake of 2400 calories. In Kerala over 18 per cent of "consumer units" in rural areas and 27 per cent in urban areas had a daily per capita intake below 1500 calories. One may recall that in their classic study of poverty in India based on NSS data, Dandekar and Rath (1971) found that Kerala had the highest percentage of people below the poverty line.

The NSS collects monthly expenditure and consumption data on a sample of households over the course of a year. Unfortunately, the variance in a household's mean caloric intake is not reported. Thus, the tabulated data iron out seasonal fluctuations. While low average intakes over long periods of time already have serious implications for nutritional status, seasonal fluctuations can be even more detrimental. Given that among the poor in Kerala the *average* intake is already very low, in the absence of data disaggregated over

the course of the year, one can surmise that during lean periods, the shortfalls in calorie intake are exceedingly drastic.

As NSS food consumption estimates are based on consumer expenditure data, it has been suggested that they grossly underestimate caloric intake because food items such as tapioca and coconut, which are grown in Keralite "kitchen gardens," are not accounted (UN, 1975). However, one should note that the levels measured by the NSS are very similar to calorie consumption data obtained by actual diet surveys, which collect data on food consumed and not just food purchased, and so would include these homegrown foods. For example, the National Institute of Nutrition (1973) obtained a per capita calorie consumption figure of 1842 based on diet surveys between 1960 and 1969, which is in consonance with the average figure of 1620 calories obtained by the NSS in 1961-62. Data gathered by the National Nutrition Monitoring Bureau during the 1970s also show Kerala as having the lowest average caloric intakes among ten states surveyed (1983 calories per capita in rural areas) and the highest proportion of households with inadequate food available—between 54 and 81 per cent in the years 1976 to 1979, and 53 per cent in 1980 (the most recent year available). At the individual level, one out of every four persons was deficient in both calorie and protein intake, with higher proportions among vulnerable groups (*e.g.* 63 per cent among lactating females, 36 per cent among 1-4 year old children).

In her study of agricultural labourers' households, Mencher (1980, 1982) also investigated food consumption. By comparing villages, she showed that less work meant less to eat. She found that the majority of households had an inadequate diet. Their calorie deficits were not made up by eating tapioca. Mencher reported seeing no tapioca growing in the compounds of agricultural labourers homes in the areas she studied. (The growing of tapioca is regionalised and much is being used to manufacture starch). Dietary preference for rice remained high, and this food accounted for most of the calories consumed, in contrast to the notion held by Gwatkin (1979) that Keralite diets are "balanced." With the spread of refrigeration and demand from outside the state for fish, vegetables and fruit, these items are fast disappearing from the poor man's diet.

Agricultural labourers are particularly susceptible to "seasonality" and Mencher describes "seeing" people getting thinner between April and mid-June. The use of fair price shops by these poor households was also seasonal. They did not get credit from the fair price shops and so when cash was low, they were forced to buy from local shopkeepers whose off-season prices are higher. Thus, the public distribution system caters primarily to regular wage-earners, salaried workers in the lower middle classes and urban residents (cf. Kumar, 1979).

Mencher's observations are corroborated by those of Banerji (1982). In an in-depth study of 19 villages in different parts of the country, Banerji included two villages in Balghat district of Kerala. He found that 70 per cent of the people of one village reported hunger for 3 to 6 months in the year. In the other village almost 40 per cent went hungry for 3-6 months and a further 20 per cent for over 6 months in the year. These two villages had the worst "hunger situation" of all those he studied in the country.

While it is generally acknowledged that nutrition and health are closely related, it has usually been assumed that if data on nutrition (*i.e.* food intake) and health (*i.e.* mortality) are incompatible, the fault lies in the poor quality of nutrition data or the "inappropriateness" of nutritional yardsticks (Sukhatme, 1982). The tendency has been either to show that the food intake data are gross underestimates as was done by the Centre for Development Studies in their pioneering work on poverty in Kerala (UN, 1975), or to consider the prevailing calorie intakes 'adequate' (as does Ratcliffe, 1977, 1978 and the proponents of the "small but healthy" hypothesis e.g Seckler, 1982). A third tendency has been to gloss over inadequate nutrition, considering it unimportant for 'demographic transition.' For example, even Nag (1981), who argued that there is little data to support Ratcliffe's hypothesis that food was more equitably distributed as a result of land reforms, minimum wage legislation, "effective" public distribution through fair price shops and school feeding programmes, did [not consider nutrition a confounding factor in his "social development" theory. The belief that "social development" can be achieved without concurrent economic development has obscured the adverse

consequences of low economic development on actual levels of living, nutrition and health.

The assumption that low mortality implies low morbidity and an absence of malnutrition is however belied by the nutrition and morbidity surveys and anthropological investigations discussed above which point out that low food intakes are indeed prevalent in Kerala and that these are reflected in poor nutritional status and in the high incidence of disease. Although morbidity data are, admittedly, deficient, their improvement could only reveal *higher* levels of illness.

The lack of 'correlation' between morbidity and mortality in Kerala is largely explained by the high utilisation of curative health services in the state which help to avert deaths. This, in turn, suggests that the spread of health services has been a key factor in Kerala's mortality decline, and that explanations that gloss over this fact are inadequate. Factors underlying the high utilisation have already been discussed. The fact that mortality has been lowered by curative medical interventions without change in nutritional status and morbidity demonstrates that preventive health care has been less successful. This is clearly manifest in the pattern of morbidity. Panikar and his colleagues (e.g. Panikar and Soman, 1984) have consistently mentioned the poor environmental conditions (lack of sanitation and clean drinking water, poor hygiene, and overcrowding) that predispose the population to infectious diseases. Thus, the focus on Kerala's low mortality and its equation with a high "physical quality of life" (Morris and McAlpin, 1982) has even obscured widely acknowledged undernutrition-infection relationships (Scrimshaw *et al.*, 1968).

Given this 'minor' paradox in the health situation, it would be useful to examine the current status and likely future trends of factors underlying morbidity and nutritional status which may, in turn, affect mortality levels in Kerala. In this context, it is most significant that Kerala's demographic achievements are credited to synergism among a host of factors. Although historical explanations are important, trends are not irreversible. If the processes that have brought about demographic change lose momentum or are overtaken by other factors, a new situation may obtain with regard to morbidity, mortality or fertility. Thus, a discussion of factors that may contribute to

and action.

Trends in Related Factors

Population Growth

Since the 1910s Kerala's crude death rate has been lower than the all-India average, and the lowest of all Indian states since the 1940s (Bhattacharjee and Shastri, 1976; Mitra, 1978). Declines in the 1970s have been most remarkable. As already mentioned, rural-urban differentials are lower for Kerala than any other state and females actually outlive males, an altogether unique situation (CBHI, 1983).

On the other hand, Kerala's birth rate declined very slowly (at about the same level as the all-India rate) until the 1961-70 decade (Nag, 1983). From 1921-30 to 1961-71 it declined by 8 births per 1000 (or 20 per cent) and by a further 10 births per 1000 between 1971-81. Thus, the total decline since 1921-30 has been around 45 per cent, though especially sharp over the past 20 years. In the same period, the all India birth rate has declined by 30 per cent. Since 1971, Kerala's birth rate has been the lowest among Indian States.

However, because Kerala's mortality declines occurred earlier and more steeply than its fertility declines, its population growth rate increased every decade until 1961-71 (Kurup and Shamala Devi, 1982; Rayappa and Prabhakara, 1983). Its decadal growth rate was higher than the country's average until 1971, particularly in the 1921-31 and 1941-51 decades. (Interestingly, unlike other parts of the country, Kerala's population did not decrease during the great pandemic between 1911 and 1921). Most recently, because the decline in Kerala's birth rate has caught up with the fall in mortality, the decadal growth rate has fallen for the first time—from 26.3 per cent in the 1961-71 period to 19.2 per cent in 1971-81.

During this century, Kerala's population growth rate has been double that of the country as whole. While India's population has trebled since the turn of the century, Kerala's has increased four-fold (from 6.3 million in 1901 to 25.5 million in 1981), doubling between 1941 and 1971 alone. Consequently, Kerala is the most densely populated state in the country, with three times the number of persons per square kilometre than India as a whole. This high density has important implications for the provision of curative and preventive health services and for the environmental and economic factors affecting health. For example if the 'equitable distribution' of health and education services has been among the factors ensuring Kerala's lower mortality, will the favourable situation continue in the face of population pressure? Will much-needed water and sanitation improvements be possible with the attendant overcrowding? And so on.

Declining Sex Ratio

While the decline in the country's sex ratio during the course of this century is well noted, Kerala is usually cited as an exception because its sex ratio favours females (Mitra, 1979). The fact that Kerala's sex ratio has also been declining has avoided notice. In the 1981 Census the sex ratio was 1032 females per 1000 males in Kerala (Government of Kerala, 1984). If one adds to the male and female populations the number of male and female emigrants estimated at the time of the census, the sex ratio of the total population emerges as 1018. This figure is consistent with the declining trend in the sex ratio of the overall population which has been occurring since 1951, when it was 1028.

This decline is further substantiated by the low sex ratio in the 0-14 year population group (971 females per 1000 males) and is borne out by analysis of the sex ratios of single decadal cohorts i.e. the 0-9, 10-19 and 20-29 year age groups. The sex ratios of these groups are 967, 1000 and 1120 respectively. One would indeed expect the sex ratio to be higher among adult populations because of the higher out-migration of males, and in fact the ratio in the 15-34 age group is 1084. However, not all of the difference could be so accounted, especially since in the most recent decade the number of female out-migrants has also risen and amounts to about three-quarters of the number of male emigrants (Gulati, 1983). If one accepts, as Gulati has suggested, that almost 80 per cent of emigrants are under 35 years of age (and presumably over 15 years), one can calculate

the sex ratio of the population including these men and women. It works out to 1051. A comparison of the ratio in this twenty-year cohort with that of the cohort under 15 (971) again shows a considerable decline in the sex ratio over time.

The 1981 Census ranked Kerala's districts by their sex ratio (Government of Kerala, 1984). One finds, not surprisingly, that those districts that had the highest sex ratio had provided the largest numbers of males to the out-migration phenomenon as shown by Gulati's (1983) ranking of districts. Thus, male out-migration is currently responsible for a good part of the "favourable" sex ratio in Kerala. Were it to cease the situation would be different. One might conclude (from these data on sex ratio) that the status of women in Kerala is no longer as favourable as it used to be and that it may be declining at an alarming rate. This may in turn signal changes in the health situation if (socially or economically) women are increasingly prevented from utilising health services or obtaining health knowledge.

Changing Family and Household Structure

In fact, emigration may also have other effects on the fertility and mortality levels of the state. Although out-migration from Kerala is not just a recent phenomenon, the recent wave of emigration is in large part a response to the high unemployment levels of the state. It appears to have several distinct characteristics (Gulati, 1983). First, a large proportion of the emigrants are from districts (in the Malabar region) which have a higher percentage of Muslims in their populations than the state average. These districts also have the lowest per capita domestic production levels in the state. The possible repercussions of this on women's status and consequently on health have already been alluded to. It should be noted, however, that although emigration among the Muslims of Kerala is high, it is by no means limited to them, Hindus and Christians also out-migrating in significant numbers. Second, the emigrants are mostly young men. Although as many as half the emigrating man may be unmarried, the others leave behind wives and children. The majority of migrant households are low-income households. Gulati has reported the effects of this migration on the family. She hypothesized an increased interdependence

among family members of emigrants. This includes the re-establishment of joint or extended families in place of nuclear families. In the 1973-74 National Sample Survey, Kerala ranked third in terms of household size in rural areas among 17 States surveyed (exceeded only by Punjab and Haryana) (NSS, 1976). It had an average of 5.72 persons per household, compared with an all-India average of 5.31 persons. Of these, 1.79 persons were adult women (or almost one out of every 3 persons). This was by far the highest number of adult women per household of any State. On the other hand, Kerala had fewer children per household than most other States, and ranked sixteenth out of the 17 States (the exception being Tamil Nadu) in terms of the ratio of children to adult women in these households.

As a result of the male-biased emigration, the emigre households have an even higher proportion of females (and even village-level sex ratios are often highly skewed). On the positive side, these women appear more independent, especially in the management of household and family affairs, and in the schooling of children. They are also becoming more active in outside economic transactions (Gulati, 1983). However, they are also apparently subject to greater pressures and tensions, and mental health problems are on the increase (Anon, 1982). Family breakdowns are not uncommon. Migration can also be expected to have an impact on fertility and a study cited by Gulati noted the low proportion of children among emigre households. Health awareness and behaviour may well change in this context.

A third feature of the out-migration is that remittances from these emigrants now make up a sizeable proportion (17 per cent) of the State's domestic product. Gulati has estimated that they added 30 per cent to the income of the average rural household in 1980-81 (considering both migrant and non-migrant households). In the case of migrant households, the contribution is obviously a larger percentage, and many depend on the remittances for their living expenses. Housing has been one of the chief investments. Although standards of living are believed to have improved in these households, in the absence of specific information about their access to clean water and sanitation, this cannot be assumed to be high. Thus, the impact

of emigration on the health status of those remaining behind may not necessarily be positive.

Economic Situation

Kerala's per capita income has been lower than the all-India average at least since the 1960s and this gap may be widening further. The State's per capita annual income is Rs. 1100 compared with Rs. 2300 in Punjab. Per capita consumption expenditure levels in both rural and urban areas of the state have also been consistently low, the average expenditure being about 85 per cent of the all-India average figure during the 1960s and 1970s. Kerala's economic growth rate has barely kept pace with its population growth rate and a significant proportion of its population are still below the poverty line. In 1980, 18 per cent of the State's labour force were unemployed and a further 36 per cent had less than 120 days employment in the year. Although the minimum wage of the agricultural labourer and wages of semi and unskilled workers are higher in Kerala than in other States, they (along with other factors) have led to the shrinkage of the job market.

High population density and successful land distribution measures have engendered a situation whereby the average landholding in Kerala is about half a hectare. Ninety per cent of farmers in Kerala have holdings below one hectare (compared with 10 per cent in Punjab). This situation must be juxtaposed with the high average household size in Kerala mentioned previously. Large families, comprised mostly of adults, are dependent on small acreage for food, which may have serious nutritional implications.

In fact, Kerala is a food deficit State. While the staple diet of its people is rice, it does not produce enough to feed them. Reviewing the agricultural situation in the State, Panikar (1984b) pointed out that there has been a decline in the area under rice cultivation since 1974-75, while rice accounts for 30 per cent of the total cropped area, its 'yield rate' was static over the decade of the 1970s and per capita production actually declined during the decade. The staple has been 'imported' from other States to support the public distribution system. Despite this system, the open market price of rice has been higher than that in the rest of the country. Tapioca (another

important source of calories, but modestly occupying only 10 per cent of the total cropped area) also declined in yield (by about 30 per cent) during the 1970s, One can estimate the food value of tapioca grown on the minimal landholding of a Keralite family (one tenth of an acre), given a yield rate of 18 tons per hectare on an average and processing losses of about one-third. It works out to about 350 calories per caput per day for 350 days in the year. This is about 15 per cent of the "recommended daily allowance" of calories and therefore a mere supplement to a family's food.

Thus, although the production of cash and export crops such as rubber, coffee and tea has increased, the major food crops have declined. This deteriorating trend has serious implications for Kerala's already precarious nutritional situation. Krishnan had in fact predicted in 1976 that "the average consumption and level of nutrition in agricultural labourer households will decline" and possibly that the decline in nutritional intake would raise mortality levels.

Health Services

As discussed, Kerala's health services are widely creditted with having successfully brought down mortality levels. Several factors have enabled this situation. For one, the services (and their associated resources, financial and human) have been spatially well-distributed. Kerala consists mostly of contiguous villages with homes dispersed in such a way and communications so developed that most people are within reach of a health facility. This contrasts with the 'cluster' village settlements of most of the rest of India where lack of access to health centres located in some villages remains a major cause of the underutilisation of health facilities, and the poor coverage of people with health care.

Besides facilitating access to health care, this spatial distribution of houses in Kerala may also have been instrumental in containing disease—again, in contrast to other parts of the country where housing situated check-by-jowl abets cross-contamination among inhabitants of a village. However, if this spatial isolation of homes in Kerala reduced the transmission of disease, increased population densities ("over-

crowding") may nullify this achievement and exacerbate persisting high levels of infectious disease in the state.

The most important contributors, however, to the prevalence of infections are inadequate sanitation facilities and impure drinking water supplies (Panikar and Soman, 1984). In part the result of population density, this situation also emanates from a lack of awareness among the people of *preventive* health measures. Despite the early development of preventive and public health measures under the Rajas of Travancore and Cochin, they have clearly not kept pace with the State's development more recently. Although some infectious diseases have been reduced, malaria, filaria, hookworm, and other parasitic problems remain serious health hazards. Environmental improvements are sorely needed to reduce morbidity—and ensure that mortality trends are not reversed.

Another factor that enabled the health system to reduce mortality was the availability of qualified women doctors, nurses and other female health workers. Their presence meant that women could venture to public and private hospitals, facilitated by their higher status. However, the recent wave of emigration may have consequences both for the staffing of health facilities with women (large numbers of Keralite nurses have been emigrating to other parts of the country and out of it) and for women's use of these facilities, as previously noted.

In Kerala, in earlier years, both public and private allopathic and indigenous practitioners and facilities were widespread and were used interchangeably by patients who chose according to the disease and treatment prescribed. However, more recently, the expansion of facilities for traditional systems of medicine has been considerably slower and 'consumers' may have a reduced choice in the future.

During the 1960s and 70s Kerala had the highest proportion of State government expenditure on health of all the States (13-14 per cent) (see Chapter 9). Between 1957 and 1980, expenditure on health increased faster than total government expenditure and State domestic product. Despite this, Kerala has one of the lowest per capita health expenditures of all States in the country. Public expenditure on health may not rise further because of the general economic situation in the State. As poverty has lowered the ratio of private to public

health expenditure over time in Kerala, diminished public expenditures may occur at a time when people are most dependent on the governmental health system.

Also of significance are existing inter-regional differences in health facilities. Panikar and Soman (1984) stated that disparities in the death rates of Travancore-Cochin and Malabar decreased "as a result of the improvement in medical care facilities in the Malabar region" since the formation of Kerala in 1956. However, two lines of evidence suggest that this was not so. First, declines in mortality in Malabar actually began in the 1940s when it was still part of Madras state. Second, although, as Panikar and Soman pointed out, the number of health institutions in Malabar in 1961 was smaller than in Travancore-Cochin, an examination of health facility: population ratios shows that those in the former region were actually more favourable than in the latter (only in terms of the bed: population ratio was Travancore-Cochin better off than Malabar). In 1971 and 1981, the health facility: population ratios of districts in the Malabar region were behind those of the Travancore-Cochin area. In other words, the expansion of health facilities in the Malabar region has not been as favourable as in other parts of the state. This factor, along with the crucial social differences in these regions already referred to, may explain persisting inter-regional health disparities and even increase them.

These aspects of the health services—the enlarged population size of their 'catchment' areas, the inadequacy of preventive and public health measures, reductions in health manpower, particularly female and indigenous, in per capita public health expenditures, and interregional differences—all have serious implications for Kerala's health.

Social Trends

In the past, health and education facilities in Kerala served the majority of people and not just a privileged few. In addition to the decline of casteism brought about by early social reforms, the pattern of habitation increased social contact between members of different castes and classes. Among factors contributing to the development of infrastructure (including communications and health facilities), Mencher (1980) included

the 'emigration' of retired middle-class professionals to rural areas from urban areas of the state where they exerted demands on the government to improve facilities. The spatial dispersion of socio-economic classes most likely had a 'Jones effect'—for example, schooling came to be viewed by the poorer groups as a way to ensure that their children kept up with the neighbours. Such effects may plateau when economic conditions become constraining.

Besides the declining sex ratio and changes in family structure noted earlier there is also other evidence of changing women's status which may have repercussions on health. For example, dowry which was earlier unknown in Kerala has increasingly crept into the social system. While Kerala was earlier sequestered from the brahmanical and patriarchal customs of the rest of the country, since Independence pan-national forces of materialism, Hinduism and "Hindi film culture" are eroding its traditional social development. As women are being educated, more qualified grooms are sought from whom dowry demands are—perversely—high. If the social environment was important to the reduction of mortality then such changes in the social situation of the State are likely to be critical to the future health status of its population.

Political Developments

Kerala's experience demonstrates that social development is compatible with a broadly democratic framework and that, in fact, social changes derive momentum from a participatory atmosphere. Structural changes oriented to equity and social transformation were paramount in bringing about health improvements. Thus, any political changes of a regressive nature could also affect health in the future. Panikar and Soman (1984) have drawn attention to the political instability brought about by the proliferation of parties and coalition politics in Kerala, which does not augur well for its health situation. In particular, the centralisation of authority and bureaucratisation of decision-making, whereby people have little say in the formulation and implementation of social programmes, in contrast with the historical situation of popular participation may diminish the effectiveness of public health services.

Conclusions

From the evidence, complacency about Kerala's past mortality and fertility declines is clearly misplaced. The sustenance of low mortality levels will depend on the State's ability to deal effectively with morbidity—disease and malnutrition—henceforth. This will require action in several spheres.

Attention must be paid by the health system (and related departments) to preventive measures aimed at reducing both the spread of infections and malnutrition. Kerala's health awareness currently relates more to seeking cure than to preventing illness. To promote 'prevention,' it is not enough for health services to be 'conveniently situated,' they must reach into homes to provide individual health education and motivation. More important, facilities must be provided to the one-half to two-thirds of all households in urban and rural areas who do not have access to protected water and even lack rudimentary sanitary facilities (Panikar and Soman, 1984).

These requirements clearly stand out as priorities for the public health system in place of "sophisticated medical facilities" which are absorbing large proportions of the State's health budget (Panikar and Soman, 1984). Unless equity considerations continue to prevail in the allocation of resources, the "diseases of poverty" may well reverse Kerala's demographic achievements especially in view of increasing poverty.

The cause and effect relationship between malnutrition and ill-health has thus far been ignored. Undernutrition is clearly linked to poverty. The failure to deal with these problems has resulted in Kerala's present anomalous health situation. Since there is an association between per capita consumption expenditure and caloric intake (at least at low expenditure levels), raising economic levels in the State is the only way to reduce the prevalence of malnutrition. "Nutrition" policy must be an integral part of Kerala's future "health" policy.

The significance of Kerala's poverty has been bypassed because demographic declines of the magnitude it has experienced are believed not to be normally associated with widespread poverty. Kerala is promoted as a "cheap model of development" which has occurred in the absence of radical structural transformation, at low levels of economic investment and

without resource transfers (international or intranational) (Mohandas, 1983). In these ways Kerala's "favourable" mortality statistics are erroneously used to promote the view that poverty has been successfully overcome.

Another reason why public policy for health in Kerala has recently run down has been the tendency for the State to be viewed—and to view itself—in relation to other States in country and not in terms of the living standards of its own population. It is frequently pointed out that Kerala has already achieved national health targets (e.g. Kerala State Family Welfare Bureau, 1984). While the nation aims to achieve a death rate of 9, an infant mortality rate of 60 and a birth rate of 21 by the year 2000, Kerala's rates in 1983 were already 7, 43 and 25 respectively. One might just as well point out that while Kerala's vital rates are low compared with the rest of India and many other developing countries, they are nowhere near the level of developed countries and so much remains in the 'art of the possible.' The nation must also note that Kerala's population amounts to less than 4 per cent of the country's total so that there is 'little' consolation to be derived from her achievements. Furthermore, the approach that promotes Kerala as a model for other States in India (and other developing countries) does not pay adequate attention to what is not duplicable about Kerala—which is not just its structure, but its history. For example, while the study by Zachariah (1981) draws "policy conclusions for other states," these are theoretically interesting but remain practically limited.

CHAPTER 9

RESOURCES FOR HEALTH CARE

Besides "poor" knowledge, a lack of organisation or inappropriate technology, inadequate finance could be a serious constraint to the implementation of the National Health Policy. To assess whether this is likely, one can extrapolate from an examination of past expenditure on public health care, assessing it against future needs. Thus, this chapter documents and analyses financing and expenditure in the governmental health sector to date. Although a complete picture of resources for health care would include private health finance and expenditure as well, one is daunted from dealing with that aspect by its complex nature and by the inadequacy of data on the subject. Both these problems afflict the subject of governmental health finance as well, though to a lesser degree. Nevertheless, an effort is made here to use available information to address, in particular, the following questions : (1) What has been the pattern of investment in health services in post-Independence India? Sources of finance, proportionate expenditures on health, time trends and regional variations will be examined. (2) How have government resources been allocated within the health sector? Attention will be focused on allocations to rural health care. (3) What are future funding needs in the health field and what are the implications of past health financing and expenditure patterns to these needs? (4) Are there 'options' in regard to raising the resources necessary for future health care? From

this analysis, crucial requirements with regard to ensuring resources for the implementation of National Health Policy will be pointed out and discussed.

Financing Mechanisms

In the aggregate, governmental health expenditure consists of (a) that proportion of the Finance Commission's allocations to a State which is spent in the Medical and Public Health sub-sector, the Family Welfare sub-sector, and the Water Supply and Sanitation sub-sector; (b) any grants-in-aid made by the Finance Commission to the States for use in this sector; (c) Plan assistance for health, which is decided during the formulation of each Plan by the Planning Commission and allocated to the States in accordance with the Gadgil formula (including transfers through annual advances and loans, if any); and (d) Plan allocations to Central schemes or Centrally-sponsored schemes in the sector which are also expended by the States (Venkataraman, 1968). Thus, the Planning and Finance Commissions divide up all national resources to be allocated as Plan and Non-plan funds (Rao, 1973). The Planning Commission determines broadly how much financial assistance the States need to implement the Five-Year (and Annual) Plans. It estimates resource availabilities and allocates funds among the different sectors. Allocations to the health sector are made after consideration of all sectors in a competitive manner. Expenditure on health is decided through an iterative process between the Planning Commissions and the Health Ministries at the Central and State levels on the one hand, and the State and Central Planning Commissions on the other. Adjustments in outlays are common both during the period of Plan formulation as well as during the life of the Plan.

Although health is a State subject, the States are actually dependent on the Centre for financing both Plan and Non-plan schemes because their total expenditures generally exceed their own revenues. Overall about 30 per cent of Plan finance comes from the States' own resources, another 30 per cent from domestic borrowing, and a further 25-30 per cent from the Centre (including foreign-aided project disbursements) (Wallich, 1982). The remaining 10-15 per cent is made up by

funds for Central or Centrally-sponsored schemes. These schemes are initiated and formulated by the Central Ministries on "issues of national importance," and funded directly by the Central Government. They may be 100 per cent funded by the Centre or have "matching requirements" of the States. Although they are implemented by the States, the Centre maintains a foothold in a given sector through this mechanism. (Besides the last two categories of Central assistance to the States, there are also certain banking mechanisms such as advances and overdrafts which supplement State resources (Lakdawala, 1967). As these are not of much significance in the health sector, they shall not be discussed in any detail). However, as funds for Centrally-sponsored schemes come from the Centre's total financial 'pie,' such schemes tend to be few in number. Else, the total availability to be allocated by the Finance Commission would be smaller. If a Centrally-sponsored scheme favours a particular State, the others lose out because of the manner in which the remaining resources are allocated. The mechanism of grants-in-aid, however, enables poorer States to fulfil their Plan targets with additional Central assistance.

Allocations to Non-plan expenditure are made by the Finance Commission in accordance with the Gadgil formula, which distributes available resources among the States according to their 1971 populations, per capita incomes, and other factors. While Constitutional requirements, political considerations, regional problems, and administrative realities all play a role in the Centre's decisions regarding financial allocations to the States, this approach limits Central control over State budgets (Chelliah *et al.*, 1978).

In the health sector to date about three-fourths of governmental expenditures have come from Plan or Non-plan State budgets. The remainder has been expended by the States from the Central health budget on Central Sector schemes or Centrally-sponsored schemes. These schemes have covered the subjects of Communicable Diseases and Family Planning and, to varying degrees, programmes such as the Community Health Workers'/Volunteers'/Health Guides' Scheme.

A State health budget consists of Capital and Revenue Accounts. The former includes Capital expenditure and Loans and is divided into "Development" and "Non-development"

subheads. Development capital expenditure is largely Plan expenditure (but includes a residual "other" category). Similarly, the States' Revenue Account has Development and Non-development sub-divisions. Development Revenue expenditure is mostly "Recurrent plan expenditure," while Non-development expenditure is Non-plan committed expenditure (Venkataraman, 1968).

Thus, the State Plan budget consists of Capital and Revenue or Recurrent Plan expenditures which are under the Development subhead. Capital expenditures cover construction and equipment purchases and new programmes—and hence constitute the bulk of Plan expenditure, while Revenue expenditures meet recurrent costs such as wages and salaries, supplies, and so on. Recurrent expenditures of one Plan become "committed expenditures" in the subsequent Plan period. They are then subsumed into the Non-development category and the States become responsible for meeting them from Finance Commission allocations. In sum, while the Centre and the States share expenditure on "development" activities, the States must meet the total expenditure to maintain and continue health services.

The implications of this financing system for the health sector may be briefly summarised. First, the sector must compete with all other sectors for both Plan and Finance Commission allocations. The success or failure of this competition can be assessed by examining the per cent of total Plan outlays allocated to health and the proportion of total government expenditure on health, which is done in subsequent sections. Second, while Plan allocations represent expenditure on new programmes and capital investment in the sector, expenditure on ongoing efforts, particularly their recurrent costs, is reflected in Non-plan expenditure data. With time, Non-plan expenditures grow. They may do so at a rate different from the rate of growth of Plan expenditures. Thus, to examine governmental spending on health, both Plan and Non-plan categories must be considered. This point, though obvious, is frequently missed in discussions of health sector financing in India which tend to concentrate on Plan outlays alone. Third, as health is a State subject, there are wide variations in health sector expenditures by the States. This has considerable

consequences for health levels across the States and is examined in depth below. The potential to mitigate these differences exists in the mechanism of Central funding of special Schemes and grants-in-aid to the States but the extent to which this is done must be examined. Fourth, the breakdown of expenditures by Capital and Revenue accounts approximates the relative proportions of health budgets being spent on 'infrastructure' and 'services,' though the definition of these does not strictly adhere to the budgetary categories.

Plan Investment in Health

While Plan allocations to the health sector since 1951 demonstrate the growth in investment in public health infrastructure, the proportion of each Plan's outlay spent in this sector shows the decreasing importance accorded to it over time. In absolute terms, outlays grew almost thirty-fold from the First to the Sixth Five-Year Plans (at current prices), but the per cent of total plan outlay allocated to health declined (Table 9.1). In the First Five-Year Plan, which marked the commencement of construction of public health facilities and manpower training in accordance with the suggestions of the Bhore Committee, 3.3 per cent of total Plan expenditure was in the Health sub-sector, a negligible amount went to Family Planning, and 0.6 per cent was spent on Water Supply and Sanitation. The per cent of Plan funds to Health dropped gradually over succeeding plans to 1.9 per cent in the Sixth Plan. However, if expenditures on Family Welfare are added to Health allocations, a fluctuating picture emerges—the highest proportionate expenditure on these combined sub-sectors being registered in the Fourth Plan (3.9 per cent) and the lowest in the Third and Sixth Plans (2.9 per cent). An aggregate expenditure of 3.1 per cent of Plan allocations on Health and Family Welfare is obtained over the period from 1951 to 1985. From the Fourth Plan onwards, Family Welfare has accounted for over a third of expenditure in the combined Health and Family Welfare sub-sectors.

Expenditure on Water Supply and Sanitation may also be considered investment in health and so Table 9.1 includes Plan expenditures in this sub-sector. They have increased over

TABLE 9.1

Plan Expenditure on Health, Family Welfare and Water Supply and Sanitation

	I (*1951-56*)	*II* (*1956-61*)	*III* (*1961-66*)	— (*1966-69*)	*IV* (*1969-74*)	*V* (*1974-79*)	*VI* (*1980-85*)
Health	65.2	140.8	225.9	140.2	335.5	760.8	1821.1
	(3.3)	(3.0)	(2.6)	(2.1)	(2.1)	(1.9)	(1.9)
Family Welfare	0.1	2.2	24.9	70.4	278.0	491.8	1010.0
		(0.1)	(0.3)	(1.1)	(1.8)	(1.3)	(1.0)
Total: Health + Family Welfare	65.3	143.3	250.8	210.6	613.5	1252.6	2831.1
	(3.3)	(3.1)	(2.9)	(3.2)	(3.9)	(3.3)	(2.9)
Water Supply	11.0	74.0	110.2	102.7	548.0	1107.5	3922.0
and Sanitation	(0.6)	(1.6)	(1.3)	(1.6)	(3.5)	(2.8)	(4.0)
Total: Health	76.3	217.0	361.1	313.3	1161.5	2360.1	6753.1
+ Family Welfare	(3.9)	(4.6)	(4.2)	(4.7)	(7.4)	(6.1)	(6.9)
+ Water Supply and Sanitation							
Total Plan Outlay	1960	4672	8577	6625	15779	38426	97500

Notes: Actuals except VI Plan = Outlay
Centre & States/UTs
Figures in brackets are per cent of total plan outlay in that sector.

Source: Central Bureau of Health Intelligence (1983).

350-fold over the six Plans, and also gradually increased as a proportion of total outlay, from 0.6 per cent in the First Plan to 4.0 per cent in the Sixth Plan.

The utilisation (i.e. expenditure) of Plan funds (outlays) by the different health sub-sectors is of some interest because this influences Finance Commission allocations in the subsequent Plan period. In the First Plan, the Health sub-sector utilised about three-quarters of its allotted funds while the Family Welfare sector utilised less than 15 per cent, and Water Supply only 22 per cent, giving an overall utilisation figure of just over one-half. This poor record improved during the Second Plan which registered almost 100 per cent utilisation. In the Third Plan and during the Annual Plan years (1966-69), utilisation exceeded 100 per cent in all three sub-sectors, but in the Fourth Plan which sizeably increased the allocations to Health and Family Welfare, the utilisation again declined to 82 per cent. It was somewhat higher in the Water Supply and Sanitation area. The Fifth Plan showed rough equivalence in allocations and expenditures in all sub-sectors.

The Planning Commission's Mid-term Assessment gave a picture of the utilisation of funds in the first three years of the Sixth Plan (Planning Commission, 1983). Of the total Plan allocation of Rs. 2831 crores to Health and Family Welfare, 57 per cent had been utilised, a figure that compared favourably with utilisation in other Social and Community Service sectors. The details on Rural Health in the Sixth Plan are also noteworthy. Under the Minimum Needs Programme (MNP), the schemes to train Village Health Guides and Multipurpose Workers are 50 per cent Centrally funded, while the Reorientation of Medical Education (ROME) Scheme and the Communicable Disease programmes for Malaria, TB, Leprosy and Blindness are 100 per cent Centrally-funded. While the total allocation to Rural Health under the MNP was originally Rs. 601 crores, with the transfer of the Health Guides' Scheme to the Family Welfare department, it was reduced to Rs. 577 crores. Between 1980 and 1983, 63 per cent of these funds had been spent. A further expenditure of Rs. 140 crores was anticipated for 1983-84. Despite these expenditures, the Mid-term Assessment team considered the retraining of Multipurpose Workers unsatisfactory, and mentioned "no progress" in the

scheme to train new Multipurpose Workers. It also pointed out the need to critically re-evaluate the ROME Scheme which had already used its entire five-year plan allocation within the first three years! In any case, the assessees considered the funds remaining for Rural Health insufficient for the final year of the Plan, and so listed an additional demand of Rs. 100 crores.

In the area of Water Supply and Sanitation, 54.5 per cent of the Sixth Plan allocation to rural water supply (Rs. 2007 crores) had been utilised by 1983 although only 43.3 per cent of the "problem" villages aimed to be covered by the Plan had been reached. A likely shortfall in achievement during the Plan period was therefore anticipated by the Mid-term Assessment team.

Resource utilisation levels and rates are important because in the past finances have been allocated in a somewhat 'stochastic' manner. A sector tends to be allocated resources commensurate with its previous performance. Thus, initial low utilisation rates and fluctuations may partially explain the small proportion of Plan funds habitually allocated to the health sector. This issue is especially critical at the state level because poor performance is perpetuated by such a system. States which utilise funds poorly receive small allocations. It is perhaps necessary, instead, to break the vicious cycle by increasing allocations to these States and instituting measures alongside to ensure their effective utilisation.

Utilisation is also important because of the mechanism, mentioned earlier, which 'converts' recurring Plan expenditure into "committed (Non-plan) expenditure" in the subsequent Plan period, which is met from allocations made by the Finance Commission. Aggregate National and State-level health expenditures are the sum of Plan and Non-plan expenditures and, thus, their 'growth' rates are related to utilisation of Plan funds, among other factors.

Proportionate Health Expenditure in other Categories

Besides the proportion of national Plan allocations given to health, a few other 'proportions' are useful to assess the importance accorded to the health sector in government finance.

Among these are the proportions to health of State Plan budgets, of Central and State Non-plan budgets, and of total expenditure at the State and Union levels. Recent data on some of these are considered below.

Between 1974-75 and 1984-85 State governments allocated between 2.1 per cent and 3.3 per cent of their Plan budgets to the Medical and Public Health sector (excluding Family Welfare and Water Supply and Sanitation). Although this is a dismally low percentage, a slowly increasing trend during the period is a faintly hopeful sign in contrast to declines in national Plan allocations over the same decade.

However, Plan expenditure has usually accounted for only about one-third of total expenditure in the health sector, including the sub-sectors Medical and Public Health, Family Planning and Water Supply and Sanitation. For example, in two recent years, 1979-80 and 1980-81, Plan expenditure accounted for 34 per cent of total expenditure in the health sub-sector. Thus, since Non-plan funds make up the bulk of expenditure in the health sector, one must examine the proportion to health of total (Plan and Non-plan) government expenditure to get an accurate picture of government "commitment" to health.

Indeed, when both Plan and Non-plan expenditures are included, the proportion spent on health of total State government expenditures exceeds the proportion to health of their Plan expenditures alone. For example, in the period 1971-80, health accounted for 5.62 per cent of total State government expenditures (Table 9.2). If the Current and Capital accounts of State governments are examined separately, health expenditure during this period accounted for 7.49 per cent of the former and 1.63 per cent of the latter.

However, when Central and State government expenditures are considered together, health accounted for only 3.22 per cent between 1971-80. While Capital expenditure in this sector was 0.88 per cent of total Capital expenditure, 4.57 per cent of total Consumption expenditure was on health. The comparable figures for the Fifth Plan period (1974-79) were 4.47 per cent of Consumption expenditure, 0.86 per cent of Capital expenditure, and 3.0 per cent of total expenditure. The lower proportion obtained when Union and State government expenditures are considered together than when State government expenditures

TABLE 9.2

Expenditure on Health, Family Welfare and Water Supply and Sanitation as Per Cent of Total Government Expenditure

	Central Government	*State Government*	*Central+State Governments*	
1971-72	1.54	5.44	3.27	
1972-73	2.00	5.55	3.12	
1973-74	2.06	5.23	3.08	
1974-75	1.23	5.39	3.06	
1975-76	1.14	5.56	2.92	
1976-77	1.88	5.67	2.98	3.0
1977-78	1.98	5.72	2.69	
1978-79	1.54	6.04	3.40	
1979-80	1.44	5.58	3.41	
1980-81	1.31	5.61	3.42	
1971-80		5.62	3.22	

Notes: Includes all Expenditures in Consumption and Capital categories including Loans, Transfers, etc. As Capital expenditures are very low in the Medical and Health Sector (and other Non-Economic Services except for Housing), the bulk of Total Expenditure is Current Expenditure which includes Consumption Expenditure plus Subsidies and Current Transfers.

Sources: Ministry of Finance (Various Years) *Indian Economic Statistics*.

alone are examined is, of course, due to the fact that health expenditure is only a very small percentage of Central government expenditure—between 1 and 2 per cent in the 1971-80 decade—because "health is a State subject." Nevertheless, State government allocations for health remain exceedingly small.

HEALTH AS "DEVELOPMENT" AND "SOCIAL" EXPENDITURE

However, if expenditure on health is examined as a proportion of total government "Development" expenditure, an interesting trend emerges (Table 9.3). If the Central government's Revenue account is considered alone, health expenditure accounted for 7.56 per cent in the 1981-85 period. The proportion on health had fallen from a peak of around 10 per cent in 1971-75, up to which there had been an increasing trend from 1951-55.

(Development expenditure accounts in turn for about half of total Central government expenditures).

TABLE 9.3

Expenditure on Health as Per Cent of Total "Development" Expenditure

	Central Government (Revenue Account)	*Central, State and Union Territory Governments (Revenue+Capital Accounts)*
1951-55	3.57	6.40
1956-60	8.20	8.74
1961-65	9.47	8.91
1966-70	9.72	9.20
1971-75	9.79	10.83
1976-80	8.28	13.10
1981-85	7.56	—

Notes: Column (1) is based on Revenue Account only of the Central Government.
Column (2) includes Revenue and Capital Accounts of Central, State and Union Territory Governments.
Excludes Family Planning and Water Supply and Sanitation.

Sources: Ministry of Finance (Various Years) *Indian Economic Statistics*.

Putting Central, State and Union Territory government "Development" expenditures together reveals a slightly more favourable trend—an increase from 6.4 per cent during 1951-55 to over 13 per cent in 1976-80. These figures reveal that the health sector enjoys some priority in terms of investment in development infrastructure by the States.

For accounting purposes, government expenditures are divided into four major 'functional' categories—General Services (including Defence), Social and Community Services, Economic Services, and Grants-in-Aid (which may be for development purposes). In the decade between 1970 and 1980, Central government Revenue disbursements were categorised as follows:

General Services	55.4%
Economic Services	16.3%
Social and Community Services	7.0%
Grants-in-Aid	21.3%

Clearly, Social and Community Services received a very small portion of the Central government revenue 'pie' compared with other Services and Grants-in-Aid.

In this period, capital disbursements amounted to a further 70 per cent of revenue expenditure. (That is, of total expenditure, capital disbursements accounted for roughly 40 per cent and revenue disbursements for 60 per cent). A much smaller proportion of capital disbursements (than of revenue disbursements) was spent on the Services sectors, and particularly the Social and Community Services sector, because the bulk of capital expenditure went to "Loans and Advances" to the State governments.

Considering both Capital and Revenue accounts together Central government Development expenditure in the Social and Community Services sector can be disaggregated into five subheads and an "others" category. The proportions of "Social and Community Services" expenditure in each sector between 1971 and 1980 are given below:

Education	56.6%
Medical and Public Health, Family Welfare, Water Supply and Sanitation	10.7%
Labour and Employment	5.7%
Housing and Urban Development	4.5%
Broadcasting	7.1%
Other	15.4%

Thus, one can see that the health sector received only about 10 per cent of total allocations to Social and Community Services from the Central government, and less than one-fifth of those given to Education, faring slightly better than the other three areas in this category of services.

Fortunately, the picture is somewhat better at the State level. Plan expenditure in all States combined was almost 98 per cent "Development expenditure" between 1975 and 1984. That is,

only 1.5-3.5 per cent of State Plan expenditure was used for "Non-development" purposes. Social and Community Services accounted for roughly 48 per cent (between 41.5 to 56.0 per cent) of total Plan expenditure in these years, the rest going to Economic Services. Medical and Family Welfare Services accounted on an average for about 20 per cent of total Plan expenditures in the States' sector during this period.

Again, in the States' sector, Social and Community Services accounted on an average for about 39 per cent of Non-plan expenditure. A much higher proportion of Non-plan expenditure than of Plan expenditure is spent in "Non-development" areas. "Development" accounts for only two-thirds of Non-plan expenditure in contrast with over 96 per cent of Plan expenditure. Although figures for Medical and Family Welfare expenditure are not available under the Non-plan head, these can be estimated if one assumes that the proportion of Social and Community Services expenditure going to Health is roughly the same whether under the Plan or Non-plan heads. This is not an unreasonable assumption as one would expect the Plan: Non-plan expenditure ratio to remain the same for the different categories under Social and Community Services, *i.e.* Education, Medical and Family Welfare, Housing, Water Supply and Sanitation, Social Welfare, and so on. The assumption may also hold since Capital expenditure is small compared with Consumption expenditure in Plan budgets, and Non-plan expenditure largely consists of consumption expenditures.

The per cent of total Plan expenditure in the Medical and Family Welfare sector remained relatively constant over the 1975-84 period. If Medical services are assumed to account on an average for 43 per cent of expenditure in the Social and Community Services sector, and the latter accounted for 39 per cent of Non-plan expenditure, Medical Services utilised about 16.8 per cent of total Non-plan expenditure in the States' sector between 1975 and 1984.

Finally, one can examine the 'growth' of government expenditures in the different Economic and Functional classes between 1971 and 1980, as shown in Table 9.4. It is interesting to note that the Medical and Public Health sector fared well relative to all other sectors in terms of the growth of Current expenditure, but less well on Capital expenditure

TABLE 9.4

Compound Growth Rates of Expenditure in Different Functional Categories, All States, 1971-80

	Current Expenditure	*Capital Expenditure*	*Total Expenditure*
General Public Services	12.9	3.3	12.4
Defence	12.4	—1.9	10.9
Education	15.0	12.0	14.9
Medical & Public Health	15.7	17.0	15.8
Social Services & Welfare	15.3	32.1	17.5
Economic Services	15.6	18.3	17.2
Total Expenditure	14.1	16.8	14.9

Source : Ministry of Finance (Various Years) *Indian Economic Statistics*.

'growth' compared with other Social Services (excluding Education) and Economic Services. On the whole, although the health sector surpassed many others (including Education and Defence) in the growth rate of expenditure, the computation of the rates is based on current prices. Were inflation taken into account, the 'growth' rates would be far less impressive. And, of course, population increases also affect the 'real' significance of aggregate health expenditures, so that per capita figures must be examined, as is done later.

HEALTH EXPENDITURE AT THE STATE LEVEL

Aside from Central and Centrally-sponsored schemes, the states exercise expenditure responsibility in the health field. Table 9.5 shows the relative contributions of the Central and State sectors to Plan allocations.

Since these figures pertain only to the Medical and Public Health sector, excluding Family Planning and Water Supply and

TABLE 9.5

Plan Allocations to Health by Central and State Sectors (Rs. Crores)

	I (1951-56)	*II* (1956-61)	*III* (1961-66)	— (1966-69)	*IV* (1969-74)	*V* (1974-79)	*VI* (1980-85)
Central Schemes	13.8 (13.7)	54.0 (22.7)	14.8 (6.6)	16.8 (12.0)	53.5 (12.3)	75.8 (9.5)	143.5 (7.9)
Centrally-Sponsored Schemes	—	—	5.5 (2.4)	11.1 (7.9)	176.5 (40.7)	177.0 (22.2)	457.5 (25.1)
States and Union Territories	87.1 (86.3)	183.8 (77.3)	205.6 (91.0)	112.2 (80.1)	203.5 (46.9)	543.2 (68.2)	1220.05 (67.0)
Total	100.9 (100)	237.8 (100)	225.9 (100)	140.1 (100)	433.5 (100)	796.0 (100)	1821.05 (100)

Notes : Outlays, excluding Family Planning and Water Supply & Sanitation. Figures in brackets are per cent of outlay to health in that sector.

Sources : National Institute of Health and Family Welfare (1977); Planning Commission (1980).

Sanitation, the increased proportion contributed by the Centre went towards the Communicable Disease programmes and Rural Health (which were 50 per cent Centrally-funded during this plan). The last two Plans (the Fifth and Sixth) have seen a stabilisation in the relative proportion of Plan allocations contributed by the Centre and the States—roughly two-thirds being in the States' sector, a quarter in the Centrally-sponsored schemes, and under 10 per cent in Central schemes.

Centrally-sponsored schemes were intended originally to account for no more than 30 per cent of the financial assistance routed from the Centre to the States through the Planning Commission. Their purpose is to ensure that all States implement policies and programmes of national priority. While the proportion of Plan allocations to these schemes decreased from the Fourth to the Fifth and Sixth Plans, the number of schemes has proliferated. Such schemes enable the Central government to exercise authority and influence in the State health departments. It should be noted that Family Planning has consistently been a 100 per cent Centrally-funded programme.

Besides the issue of Central authority over health expenditure and the trend to greater centralisation of health Plan resources, a major consideration in the health sector is the question of equity among States. As described earlier, the States depend on transfers from the Centre to make up the difference between their 'small' revenues and much larger expenditures. As we have seen, allocations to the social sectors (including health) are small. They inevitably become the victims of growing deficits in the government budget. Although states with strong resource positions may have larger Plans than those for whom transfers are critical, even among the former, "low priority" sectors such as health obviously get small allocations.

Nor does the process of transferring Non-plan resources help to improve the positions of poorer states. Non-plan resources are allocated by the Finance Commission in accordance with sectoral needs and different States' requirements taking into account a State's 1971 population and current per capita income. Insight into the process is provided by the Sixth Finance Commission Report (1973). Noting the States' "repeated complaints" about the inadequacy of provisions

for "medicines and diet" in hospitals and dispensaries "and the consequent hardship caused to poor patients," the Commission examined the basis on which allocations for these items were made by State governments. They found that several States, including 'well-off' ones such as Kerala, Maharashtra, Punjab, Tamil Nadu, Meghalaya, Nagaland and Tripura, made their budgetary provisions on the basis of "past actuals." In certain cases, such as in Gujarat, arbitrary ceilings were fixed on expenditures at different health facilities. If expenditure norms existed, they lacked uniformity across the States, some being on the basis of "per patient per day" while others were on an "actuals basis." There was also no uniformity, for example, in the items covered by the provision for medicines and drugs, which sometimes included hospital linen, instruments, and even major equipment such as X-ray machines. Widely differing norms had been proposed by individual States for the Fifth Plan period.

Subsequently, the Commission ruled out "number of patients per day" as the basis on which to allocate funds for medicines and diet, considering the data unreliable. The report states, "the only course open to us in these circumstances is, therefore, to categorise the states into certain broad groups on the basis of the *present provision* for medicines and diet per head of population, and to lay down *differential rates of increase* over the existing level of expenditure" (emphasis added). Accordingly, the States were grouped into three—high, average and low—expenditure groups. The higher their expenditure the greater the rate of increase allowed in the medicines and diet budget provision. Thus, rather than correcting state-level imbalances, this process exacerbated differences between the States. The Commission considered equalisation of provisions for medicines and diet on a per capita basis impractical because of the constraint in States' resources and the inadequacy of hospitals and dispensaries—once again perpetuating the vicious cycle!

During the Fifth Plan, a budgetary norm was adopted across the country for medicines to Primary Health Centres and Sub-centres in rural areas under the Minimum Needs Programme, and budget allocations made in accordance with this standard. However, as States have differing heatlh centre:

population ratios, it cannot be said that this procedure irons out differentials either. Furthermore, while the Finance Commissions have awarded special grants to States to equalise the minimum level of basic services in areas such as Education, Communications, and Public Administration, no such award has yet been made in the health sector, despite vastly differing levels in health services among the states (Finance Commission, various years). Ultimately, considerable regional imbalances in health are perpetuated by this financial allocation system.

TABLE 9.6

Expenditure on Health, Family Welfare and Water Supply & Sanitation as Per Cent of Total Revenue and Capital Expenditures of Individual States, 1979-80

	Revenue Expenditure	*Capital Expenditure*	*Revenue + Capital Expenditure*
Central Government	0.5	0.2	0.4
Andhra Pradesh	8.9	4.1	8.0
Assam	8.4	4.7	7.8
Bihar	7.9	9.8	8.4
Gujarat	9.5	6.0	8.8
Haryana	9.2	1.6	7.3
Himachal Pradesh	11.5	20.4	13.6
Jammu and Kashmir	9.2	20.4	12.9
Karnataka	8.4	0.7	7.0
Kerala	10.2	13.5	10.7
Madhya Pradesh	11.4	2.1	9.4
Maharashtra	9.8	3.7	8.8
Orissa	10.1	1.8	8.2
Punjab	9.3	2.1	7.7
Rajasthan	10.7	15.5	11.5
Tamil Nadu	10.1	2.4	9.6
Uttar Pradesh	9.4	1.3	7.8
West Bengal	11.0	6.8	10.7
Total of Union, 22 States and 4 Union Territory Governments	4.2	1.2	4.1

Source : Ministry of Finance (1984) *Combined Finance and Revenue Accounts, 1979-80.*

How much importance do individual States themselves accord the health sector? Table 9.6 lists individual State government expenditures in Revenue, Capital and Combined accounts for a single year, 1979-80.

During this year, the State and Union governments together spent 4.2 per cent of Revenue expenditure on health, 18.9 per cent on all Social and Community Services, 31.4 per cent on Economic Services, 32.5 per cent on General Services, and 10.7 per cent on Defence. (These figures are not shown in the table but were obtained from the same source.) Whether one considers Revenue or Capital Accounts independently or together, there is wide variation among the States in the per cent spent on health. Capital expenditure ranges from 0.7 per cent in Karnataka to 20.4 per cent in Himachal Pradesh and Jammu and Kashmir. (It must be remembered that as these are figures for a single year, they may not reflect a State's 'usual' expenditure and are being used here mainly to illustrate differentials). Revenue expenditures on the other hand had a much smaller range, from 7.9 per cent in Bihar to 11.5 per cent in Himachal Pradesh. Because Capital expenditure is a small percentage of the total (14.6 per cent of all expenditures and 11.5 per cent of health expenditure), the combined Revenue and Capital expenditure range was also smaller, from 7.0 per cent in Karnataka to 13.6 per cent in Himachal Pradesh. The States cluster as follows :

Per cent spent on Health of Total Revenue Expenditure

	Low (7.0—8.0)	*Medium (8.2—9.6)*	*High (10.7—13.6)*
lowest ↓ highest	Karnataka	Orissa	West Bengal
	Haryana	Bihar	Kerala
	Punjab	Gujarat	Rajasthan
	Uttar Pradesh	Maharashtra	Jammu & Kashmir
	Assam	Madhya Pradesh	Himachal Pradesh
	Andhra Pradesh	Tamil Nadu	

TABLE 9.7

Per Cent of Expenditure of Individual States on Health, Family Welfare and Water Supply & Sanitation in Different Categories and Accounts, 1974-75

	Revenue Account			*Capital Account*			*Revenue & Capital Accounts*	
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*	*Plan*	*Non-Plan*
Andhra Pradesh	25.8	66.7	92.5	7.2	0.2	7.5	33.0	67.0
Assam	27.4	64.3	91.7	8.2	0.1	8.3	35.6	64.4
Bihar	18.0	70.9	88.9	2.3	8.8	11.1	20.3	79.7
Gujarat	3.0	79.3	82.3	17.7	0.1	17.8	20.8	79.4
Haryana	33.9	52.5	86.3	13.6	0.1	13.7	47.4	52.6
Himachal Pradesh	21.4	63.9	85.3	14.7	—	1.7	36.1	63.9
Jammu & Kashmir	8.8	61.0	69.8	30.2	—	30.2	39.0	61.0
Karnataka	31.5	63.1	94.7	5.3	—	5.3	36.9	63.1
Kerala	10.5	69.5	80.0	19.9	0.1	20.0	30.4	69.6
Madhya Pradesh	39.6	54.9	94.5	5.5	—	5.5	45.1	54.9
Maharashtra	22.9	70.7	93.5	5.6	0.9	6.5	28.4	71.6
Manipur	17.2	47.8	65.0	35.0	—	35.0	52.2	47.8
Meghalaya	18.8	45.3	64.1	35.9	—	35.9	54.7	45.3
Nagaland	5.9	73.0	78.9	21.1	—	21.1	27.0	73.0
Orissa	30.5	65.3	95.8	4.2	—	4.2	34.7	65.3
Punjab	31.0	63.1	94.1	3.8	2.1	5.9	34.8	65.2
Rajasthan	17.7	65.3	83.0	17.0	—	17.0	34.7	65.3
Tamil Nadu	23.2	68.9	92.1	7.1	0.8	7.9	30.3	69.7
Tripura	16.7	67.5	84.2	15.8	—	15.8	32.5	67.5
Uttar Pradesh	29.7	64.4	94.1	4.3	1.6	5.9	34.0	66.0
West Bengal	21.6	71.8	93.4	6.6	—	6.6	28.2	71.8
All States	23.2	66.7	89.9	9.2	0.9	10.1	32.4	67.6

Source: Reserve Bank of India (1976).

TABLE 9.8

Sixth Plan Outlays on Health and Rural Health by Different States

	VI Plan Outlay on Health (Rs. Crores)	*Health Outlay Per Caput for Plan Period*[a]	*VI Plan Allocation to Health in MNP (Rs. Crores)*	*Percentage of Health Outlay Allocated to Rural Health*	*Rural Health Outlay per Rural Caput for Plan Period*[b]	*Per Capita Rural Health Outlay as Per Cent of Total Per-Capita Health Outlay*
	1	2	3	4	5	6
Andhra Pradesh	65.00	12.13 (19)	24.39	37.5	5.93 (20-21)	49
Assam	32.00	16.08 (13)	12.00	37.5	6.70 (17)	42
Bihar	83.40	11.79 (21)	36.27	44.0	5.93 (20-21)	50
Gujarat	70.00	20.53 (10)	20.09	28.7	8.55 (10)	42
Haryana	48.00	37.21 (8)	8.53	17.8	8.45 (11)	23
Himachal Pradesh	16.18	37.63 (7)	5.00	30.9	12.50 (7)	33
Jammu & Kashmir	48.00	80.00 (3)	9.03	18.8	19.21 (5)	24
Karnataka	65.53	17.66 (12)	20.03	30.6	7.59 (13)	43
Kerala	36.55	14.33 (15)	9.54	26.1	4.61 (22)	32
Madhya Pradesh	94.00	18.01 (11)	36.07	38.4	8.67 (9)	48
Maharashtra	89.46	14.25 (16)	30.00	33.5	7.35 (14)	52
Manipur	9.70	69.29 (4)	5.27	54.3	47.91 (1)	69
Meghalaya	7.10	54.62 (5)	4.43	62.4	40.27 (4)	74
Nagaland	8.00	100.00 (2)	2.97	37.1	42.43 (3)	42
Orissa	29.60	11.21 (22)	16.00	54.1	6.87 (15)	61
Punjab	49.00	29.17 (9)	13.77	28.1	11.38 (8)	39
Rajasthan	40.98	11.95 (20)	17.43	42.5	6.43 (18)	54
Sikkim	4.35	145.00 (1)	1.39	32.0	46.33 (2)	32
Tamil Nadu	67.80	14.01 (17)	21.82	32.2	6.71 (16)	48
Tripura	8.56	40.76 (6)	3.36	39.3	18.67 (6)	48
Uttar Pradesh	134.98	12.17 (18)	74.89	55.5	8.23 (12)	68
West Bengal	84.00	15.38 (14)	24.88	29.6	6.20 (19)	40
22 States	1091.19	16.16	398.16	36.5	7.62	47
9 Union Territories	128.86	131.49	10.30	8.0	38.15	29
All States & Union Territories	1220.85	17.81	408.41	33.5	7.77	44
All States, Union Territories & Centre	1821.05	26.58	577.00	31.7	10.98	41

Notes : (a) Using 1981 Census Final Population Totals (Office of the Registrar General, 1982).
(b) Using 1981 Census Final Rural Population Totals (Office of the Registrar General, 1982).
(c) Column 6=(Column 5/Column 2) × 100.
Figures in brackets are ranks of individual states among 22 states.

TABLE 9.9

Per Capita Health Expenditures of Different States, 1956-57 to 1981-82 (at 5-Year Intervals)

	1956-57	*1961-62*	*1966-67*	*1971-72*	*1976-77*	*1981-82*
Andhra Pradesh	0.88	2.03	3.61	6.32	12.00	22.51
Assam	1.43	2.58	3.66	5.46	11.05	19.38
Bihar	0.48	1.64	1.85	3.28	5.76	14.49
Gujarat	—	2.00	4.66	7.01	14.74	26,71
Haryana	—	—	1.27	8.88	14.29	37.10
Himachal Pradesh	—	—	—	11.51	21.69	101.29
Jammu & Kashmir	—	3.29	7.50	11.58	30.53	94.72
Karnataka	0.79	2.17	3.14	5.07	12.09	21.00
Kerala	—	3.35	5.03	7.17	19.51	35.61
Madhya Pradesh	0.51	2.91	3.03	4.89	10.07	23.05
Maharashtra	0.80	2.48	4.26	7.49	15.08	23.26
Manipur	—	—	—	10.13	18.70	83.04
Meghalaya	—	—	—	14.07	31.62	131.65
Nagaland	—	—	—	38.64	98.13	208.38
Orissa	0.79	1.53	3.20	4.85	9.68	22.18
Punjab	0.57	2.57	5.00	7.24	16.78	32.55
Rajasthan	0.87	2.84	4.39	8.84	16.95	37.22
Sikkim	—	—	—	—	54.24	84.08
Tamil Nadu	0.86	2.56	4.46	8.29	15.63	30.10
Tripura	—	—	—	8.83	16.35	39.04
Uttar Pradesh	0.73	1.18	2.16	3.10	5.75	14.38
West Bengal	2.06	2.90	4.10	6.72	14.90	27.78
All India	1.50	2.35	3.79	6.39	13.31	27.86

Notes : Expenditure on Medical and Public Health, excluding Family Welfare; All-India figure includes Central and State Governments.

Sources : 1956-57, 1961-62, 1966-67 } National Institute of Health and Family Welfare (1977).
1971-72 Central Bureau of Health Intelligence (1976a).
1976-77 Central Bureau of Health Intelligence (1983).
1981-82 Lok Sabha (1984).

To what extent do state-level variations reflect past "commitments" or continuing development of health care? Table 9.7 illustrates the variations in the States' modes of financing health activities. In the single year 1974-75, Plan expenditures accounted for anywhere from 20 to 55 per cent of State health expenditures, the rest being Non-plan expenditure. Capital expenditures varied from 4 per cent to over 35 per cent, mostly from Plan funds. While Plan expenditures on Revenue account varied from 6 to 40 per cent, Non-plan Revenue expenditure met the bulk (45 to 80 per cent) of health sector expenses. On an average, one-third of State health expenditures were from 'new' Plan funds and 90 per cent were on 'committed' Revenue Account.

What is the relative 'commitment' of the States to the three sub-health sectors? Data on the allocation of Revenue expenditures during the Sixth Plan period (1980-85) show that the proportion spent on Public Health and Water Supply and Sanitation ranges from a low of 12 per cent in Tamil Nadu to a high of 44 per cent in Rajasthan (Planning Commission, 1983). Family Planning receives only a small percentage because, as previously noted, most funds for this activity come from the Centre. Most States spend between two-thirds and three-fourths of their health sector funds in the Medical sub-sector alone and a quarter or so in the area of Public Health and Water Supply.

The extent to which individual States are currently committed to improving the health of their rural populations can perhaps be judged by their allocations of Sixth Plan funds to Rural Health under the Minimum Needs Programme (Table 9.8).

Several observations and conclusions can be drawn from these data. First, as column 2 shows, there was very wide variation among the States during the Sixth Plan in per capita health outlays, ranging from a very low figure of Rs. 11.21 in Orissa to the highest, Rs. 145, in Sikkim. Thirteen States including all the major ones, were clustered between Rs. 11 and Rs. 20 per caput, while the remaining nine spread up to the ceiling figure. (Wide variations are seen also in State per capita health expenditures based on Plan plus Non-plan funds in Table 9.9). If the States' 'ranks' in Sixth Plan per capita health outlay (in column 2 of Table 9.8) are compared with

their 'ranks' in terms of average annual per capita health expenditures between 1971 and 1981 (Table 9.9), one can see that the positions of a few States have changed. This suggests a change in priority given to health by the State between the 1971-81 period and the Sixth Plan. Notably, Rajasthan which ranked 7 out of 22 in its 1971-80 annual per capita health expenditure fell to a rank of 20 in its Sixth Plan allocation, Kerala fell from 9 to 15 and Maharashtra from 12 to 16. Naturally, some States also showed an 'improvement,' Karnataka rose in rank from 20 to 12, and Assam from 19 to 13, perhaps signalling that they are making greater efforts to improve their health facilities (at least relative to their earlier position vis-a-vis other States).

Second, in most cases, States allotted between 25 and 45 per cent of their Plan health outlays to Rural Health (column 4).

Third, the per capita figures for Rural Health (column 5) are most revealing. Four States allocated over Rs. 40 per capita for the Plan period (Manipur, Meghalaya, Nagaland and Sikkim). Next in rank were Jammu and Kashmir, with Rs. 19.21 per capita, Tripura (Rs. 18.67), Himachal Pradesh (Rs. 12.50) and Punjab (Rs. 11.38). The remaining States allocated between Rs. 6 and 9 per capita except for three with extremely low allocations: Kerala (Rs. 4.61), Andhra Pradesh (Rs. 5.93) and Assam (Rs. 5.93).

Finally, one can examine the proportion of rural to total per capita health outlays (column 6) as a measure of the extent to which States are serious about redistributing their health resources in favour of rural areas. Four States had percentages over 60: Manipur, Meghalaya, Uttar Pradesh and Orissa. Three others allotted at least half of the amount per rural head as per average: Rajasthan, Maharashtra and Bihar. The remaining states, however, do poorly—the worst being Haryana (23%), Jammu and Kashmir (24%), Kerala and Sikkim (32 each) and Himachal (33%).

Per Capita Health Expenditure

In addition to comparing States' allocations of Sixth Plan funds, one can consider their total per capita health expenditures

over time (at current prices) (Table 9.9). Wide variations are again obvious both in the 'level' of per capita health expenditure reached and in the 'paths' taken to achieve current levels. While the dramatic increases in expenditures both among the States and at the national level appear to have occurred post-1971, it is difficult to say how much of these were nullified by inflation. During the 1971-81 decade, most States increased their per capita health expenditures on the average by about Rs. 1.2 to Rs. 2.2 per annum. Some States have been visibly slower at increasing their expenditures, notably Bihar and U.P., which had low levels in 1971-72 and maintained this low profile through 1981-82. On the other hand, a few have increased their expenditures faster than most, especially the north-eastern states of Nagaland, Meghalaya and Manipur and also Jammu and Kashmir, Himachal Pradesh and Sikkim. For purposes of comparison, the States are grouped below into four categories according to their 1981-82 expenditure levels, and the annual 'growth' rates of their expenditures between 1971 and 1981. Their ranks in terms of Sixth Plan outlays to health (from Table 9.8) are given alongside.

	Rank in VI Plan Outlay
High level (> 75)—Rapid increase (>4)	
1. Nagaland	2
2. Meghalaya	5
3. Manipur	4
4. Jammu and Kashmir	3
5. Himachal Pradesh	7
6. Sikkim	1
Medium level (28-31)—Moderate increase (2-2.2)	
7. Rajasthan	20
8. Tripura	6
9. Kerala	15
10. Punjab	9
11. Haryana	8
Moderate low level (22-25)—Moderate low increase (1.5-1.8)	
12. Maharashtra	16
13. West Bengal	14
14. Gujarat	10
15. Madhya Pradesh	11

Low level (12-20)—Low increase (0.9-1.5)	
16. Tamil Nadu	17
17. Andhra Pradesh	19
18. Orissa	22
19. Assam	13
20. Karnataka	12
21. Bihar	21
22. Uttar Pradesh	18

From these data, it is not difficult to assess which States accord health importance in their financial allocations, and which lag far behind.

At the national level, health expenditures per caput increased gradually until 1971-72, when expenditure was Rs. 6.39 per caput. Subsequently, more rapid growth in expenditure is apparent with a doubling of the 1971-72 figure by 1976-77 (Rs. 13.31), and again by 1981-82 (Rs. 27.86). Although inflation has perhaps nullified a considerable proportion of these increases, there is nevertheless hope in the increasing trend in expenditure per caput of the 1970s.

Even then, India ranks low among developing countries in its per capita health expenditure, despite the fact that it is reported to have a more highly-developed and wider-spread health infrastructure than most other less-developed countries. A 1978 study of 107 low and lower-middle income countries (including the 68 poorest countries in the world, with per capita incomes under $ 700 per annum, but excluding China) reported public sector per capita health expenditures between US $0.58 and $ 27.00 (WHO, 1981). In that year the per capita health expenditure in India was about $2.10. The study found that allocations of public funds to the health sector generally did not exceed 1 per cent of each country's gross national product. The figure for public health spending in India is roughly 0.6 per cent of GNP. In a later section, I shall discuss private expenditure in the health sector (which also forms part of GNP spent on health), and contrast this with government expenditure.

Local-Level Health Expenditure

Although analyses of health expenditure tend to be confined to national and State-level data, it must be remembered that, in the matter of rural health, spending is actually controlled at the district and ultimately the block level. Health expenditures

Table 9.10

Per Cent on Health of Total Expenditure of Local Bodies, 1976-77

	Urban Local Bodies		*Rural Local Bodies*	
	Medical	*Water Supply & Sanitation*	*Medical*	*Water Supply & Sanitation*
Andhra Pradesh	10.1	5.1	2.3	4.5
Assam	0.9	49.9	0.6	1.0
Bihar	1.2	23.3	15.9*	12.7*
Gujarat	7.5*	13.1*	9.4	2.8
Haryana	0.5	35.2	NA	NA
Himachal Pradesh	0.6	34.9	4.7	5.3
Jammu & Kashmir	10.5	—	NA	NA
Karnataka	7.8**	35.2**	NA	NA
Kerala	35.4	6.6	—	—
Madhya Pradesh	2.9	28.4	—	—
Maharashtra	11.5	17.0	5.5	2.4
Manipur	—	—	NA	NA
Meghalaya	—	12.0	—	—
Nagaland	—	—	NA	NA
Orissa	2.3	8.5	1.9	8.2
Punjab	2.0	21.2	—	16.6
Rajasthan	0.5	30.5	NA	NA
Sikkim	—	—	NA	NA
Tamil Nadu	NA	NA	NA	NA
Tripura	—	—	NA	NA
Uttar Pradesh	23.5	13.9	8.3	0.1
West Bengal	12.6*	25.8*	2.8	0.1
All States	10.3	18.7	3.5	2.4

Notes : *1975-76.
**1974-75.
NA=Not Available.

Source : Computed from Finance Commission (1978).

may vary considerably at these levels but there are severe constraints to collecting and analysing their data. Differences are ultimately submerged in State-level aggregations.

However, some data are available on the health expenditures of local bodies. For example, Table 9.10 gives expenditure on health as a per cent of total expenditure by local bodies, disaggregated by States and rural/urban sectors for the single year 1976-77.

In both urban and rural areas, there is wide variation among the States in expenditure by local bodies in both the Medical and Water Supply and Sanitation sub-sectors. The former varies from less than one per cent of the total in urban areas of States such as Assam, Haryana, Himachal Pradesh and Rajasthan to levels of over 20 per cent in U.P. and Kerala. The aggregate total for urban areas of all States is over 10 per cent; but it is one-third of this for rural areas. Water Supply generally accounted for proportionally higher expenditures, being over one-third of total expenditure in the urban areas of Assam, Haryana, Himachal and Karnataka. In rural areas, however, Water Supply fared worse than Medical expenditure, accounting for only 2.4 per cent of the total. Of course, besides variations in spending, there may be considerable differences between States in the 'accuracy' of data reported and the extent to which monies are actually spent where they are said to be! Both rationalisation of health spending across States and districts and monitoring of expenditures for their 'effectiveness' would appear to be necessary.

Intrasectoral Allocations

While discussions of health sector financing may focus on finances available to the sector as a whole, it is not just the availability of funds that determines improvement in health. Patterns of spending within the health sector are of paramount importance. Health budgets that are heavily biased towards sophisticated curative facilities are inappropriate in terms of national health objectives. They are now even considered so for developed countries (WHO, 1980). The need is for cost-effective allocations to different levels in the health system in

TABLE 9.11

Intra-Sectoral Allocation of Health Plan Funds (Rs. Crores)

	I 1951-56	*II* 1956-61	*III* 1961-66	— 1966-69	*IV* 1969-74	*V* 1974-79	*VI* 1980-85	*I—VI* 1951-85
Hospitals, Dispensaries and Primary Health Centres	25 (17.9)	36 (16.0)	37 (14.9)	25 (11.1)	88.3 (7.6)	155.3 (6.7)	720.1* (10.7)	1086.7* (9.8)
Control of Communicable Diseases	23.1 (16.5)	64 (28.4)	69 (27.7)	23.1 (10.2)	127 (11.0)	168.6 (7.2)	524 (7.8)	998.8 (9.0)
Education and Training	21.6 (15.4)	36 (16.0)	35 (14.1)	21.6 (9.6)	98.2 (8.5)	111.8 (4.8)	*	324.2 (2.9)
Indigenous Systems of Medicine	0.4 (0.3)	4.0 (1.8)	4 (1.6)	4 (1.8)	15.8 (1.4)	28.1 (1.2)	*	56.3 (0.5)
Minimum Needs Programme	—	—	—	—	76.5 (6.6)	291.5 (12.5)	577 (8.6)	946 0 (8.5)
Other	20.2 (14.4)	6.0 (2.7)	5 (2.0)	20.2 (8.9)	27.7 (2.4)	40.9 (1.8)	*	120.0 (1.1)
Total Health	90.3 (64.5)	146.0 (64.9)	150 (60.2)	93.9 (41.6)	433.5 (37.5)	796.2 (34.1)	1821.1 (27.0)	3532.0 (31.9)
Family Planning	0.7 (0.5)	3.0 (1.3)	27 (10.8)	82.9 (36.7)	315 (27.3)	516 (22.1)	1010 (15.0)	1954.6 (17.6)
Total : Health + Family Planning	91 0 (65.0)	149.0 (66.2)	177 (71.1)	176.8 (78.3)	748.5 (64.8)	1312.2 (56.2)	2831.1 (41.9)	5486.6 (49.5)
Water Supply & Sanitation	49 (35.0)	76 (33.8)	72 (28.9)	49.0 (21.7)	407 (35.2)	1022 (43.8)	3922 (58.0)	5597.0 (50.5)
Total : Health+Family Welfare+Water Supply & Sanitation	140 (100)	225 (100)	249 (100)	225.8 (100)	1155.5 (100)	2334.2 (100)	6753 (100)	11083.6 (100)

Notes : Figures in brackets are per cent of Total plan allocation to Health in that sub-sector.
This figure includes allocation to three other sub-sectors marked by.

Sources : I-II Plans: CBHI, 1976a.
III, 1966-69 and IV Plans: Planning Commission, 1974.
V Plan: Banerji (1983a).
VI Plan: Planning Commission (1980).

keeping with priority problems and the principal of universal coverage. There is no doubt that larger health expenditures are desirable but, in addition, better distribution and use of health resources are also required if there is to be a significant positive impact on the health of the majority.

Accordingly the distribution of funds within the health sector is examined below. Table 9.11 shows the manner in which Plan funds have been allocated among Health Facilities, Communicable Disease Control Programmes, Medical Education, Indigenous Systems of Medicine, Rural Health Care, Family Planning and Water Supply and Sanitation, since Independence. In the first three Plans, roughly one-third of the total health allocation went to Water Supply and Sanitation. The remaining two-thirds was almost equally divided among health infrastructures, disease control programmes, education and "other" schemes in the First Plan. However, in the Second and Third Plans, the disease control programmes predominated (although some of this 'reallocation' may simply be due to a redefinition of accounting categories). Family Planning began to consume large proportions of total allocations in the Annual Plan years 1966-69, so that both Health and Water Supply dropped in terms of proportionate expenditure beyond that time. While allocations in absolute figures increased, the proportions to health facilities, communicable diseases, and education were relatively low in the Fourth, Fifth and Sixth Plans. Although some Family Planning expenditures can be considered 'contributions' to health services, a considerable proportion of them has gone to pay incentives to family planning acceptors which cannot strictly be considered investment in health care.

The Fourth Plan saw the inception of the Minimum Needs Programme for Rural Health. This programme accounted for 12 per cent of the total health allocation in the Fifth Plan, but an even lower percentage subsequently. On the other hand, the percentage to Water Supply increased considerably over the last three Plans, while Family Planning dropped from an all-time high of 36.7 per cent between 1966-69 to 15 per cent in the Sixth Plan. Of the total expenditure on Water Supply and Sanitation from the First to the Fourth Plans 65 per cent went

towards urban water supply systems. In the Fifth and Sixth Plans also, despite vastly increased allocations, only about one-third was to be spent in rural areas, particularly on the provision of drinking water.

The last column of Table 9.11 gives the total amounts spent in the various sub-areas between 1951 and 1985. If the entire 35 year period is considered, Health and Family Planning received roughly half the total allocation to all three sub-sectors. Within these two sub-sectors alone, health facilities utilised about 20 per cent and Communicable Diseases Programmes 18 pet cent of funds. Seventeen per cent went to the Minimum Needs Programme, 6 per cent to Education and Training and 35.6 per cent to Family Planning. In the health sub-sector alone, the most substantial allocations have gone to health infrastructures, followed by the Communicable Diseases Programmes, and then Rural Health, when all six Plans are considered together. These breakdowns illustrate the relative importance accorded to different health programmes over the course of development of public health care in India.

One can further examine the relative importance accorded individual programmes by the Centre and the States. Focusing on the Fifth and Sixth plans, one finds a slight increase in the States' relative contribution to aggregate health expenditure from the earlier (about 51 per cent of the total) to the later (67 per cent) Plan. While the Rural Health programme was entirely in the States' sector in the Fifth Plan, the Centre absorbed 30 per cent of its cost in the Sixth Plan. Conversely, Communicable Disease control was largely Centrally-funded in the earlier Plan, but the States met 45 per cent of the expenditure on this in the Sixth Plan. In the health infra-structure and education categories, the Centre met about 20 per cent of expenditure in each Plan period. While the Centre expended about three-fourths of its total health allocation on the Rural Health and Communicable Diseases Programmes the States spent only 35 per cent of their Fifth Plan funds and 53 per cent of their Sixth Plan funds on these programmes. Of course, Family Planning was entirely Centrally-funded in both Plans. Significantly, the Central allocation to this activity was 50 and 70 per cent more than its allocation to Health in the two Plans respectively. The division of responsibility in terms of Central

and State allocations to different health programmes has important implications for future health financing, which are discussed later.

Allocations of Funds to Rural Health

Although Rural Health became a separate expenditure category with the inception of the Minimum Needs Programme in the Fourth Plan, its importance has only been recognised more recently. As the budget allocation to it has grown in the last three Plans, it is useful to examine how it fares relative to other programmes. In the Sixth Plan period, the total allocation to health was Rs. 1821 crores. One-third of Plan funds (Rs. 601 crores) were allotted by the Centre, the remaining two-thirds (Rs. 1220 crores) by the States and Union Territories. Of the Centre's share, about half went toward Communicable Diseases Programmes, while 28 and 24 per cent were allotted respectively to Rural Health and to Hospitals, Medical Education and Research. On the other hand, the bulk of the States' share (47.3 per cent) was allocated to the last category of medical infrastructure, one-third to Rural Health, and the remainder (19.3 per cent) to Communicable Diseases. Of total Plan funds in health, therefore, around 40 per cent were allocated to health facilities and medical education, while around 30 per cent each were in the Rural Health and Communicable Disease categories. Within the three categories of expenditure, the ratio of State to Central funding is therefore: Rural Health: 70:30; Communicable Diseases: 45:55; and Hospitals, etc. 80:20.

Given the States' overall preference for allocating monies to the Hospitals category, it is not surprising that their contribution to Rural Health is only 22 per cent of the total health 'pie.' The Centre's share of Rural Health is even more dismal: 1:9 per cent of total health funds. Both the Rural Health and Communicable Diseases Programmes are 50 per cent Centrally-sponsored schemes, so that Central funds must be matched by the States. A further point of interest is that the two programmes which are of paramount importance to Primary Health Care—and hence to national health policy—the Health Guides' Scheme and the Multipurpose Workers' Scheme which are Centrally-sponsored—got only 8 per cent of the States' allocation and 15 per cent of the total health budget.

To assess whether 'equity' considerations went into the decision to allocate funds to Rural Health, one can evaluate them on a per capita basis. Dividing the total health outlay by the country's 1981 population, a per capita five-year plan outlay for health of Rs. 26.58 is obtained. The comparative figure for Rural Health is Rs. 10.98. Thus on a per capita basis Rural Health received only about two-fifths of the per capita funding of the health sector altogether!

Of the total Sixth Plan outlay in the States' sector, 56.1 per cent had been expended between 1980 and 83, according to the Mid-term Assessment report (Planning Commission, 1983). Forty-six per cent of the States' allocation to Rural Health was spent in these first three years. In addition to slower expenditure of funds for Rural Health, only 41 per cent of the target number of Sub-centres had been established, although 90 per cent of the target number of additional Primary Health Centres had been reached. The Mid-term Assessment mentioned problems with construction and shortages of manpower as reasons for the failure to reach set targets.

The largest proportion of State funds in the health sector was allocated to Food and Drug Control, School Health, Medical Education, and Hospitals and Dispensaries at the district, sub-divisional and taluk level. According to the Mid-term Assessment, the last two categories, especially medical education, research and development of super-specialities, had received "relatively larger allocations" and had "larger expenditures than their allocations!" As the assessees note, the States are under "compulsion" to allocate large resources to medical colleges and hospitals to keep up with Medical Council standards. This scenario is likely to present problems to the desired reallocation of funds to Rural Health.

Line Items in Government Health Budgets

A somewhat different approach to examining government health expenditures is presented in Table 9.12. Here, total Revenue expenditures for a single year (1979-80) in the Medical, Family Welfare, Public Health and Sanitation, and Water Supply and Sewerage sub-sectors are broken down into heads of expenditure

which permit comparisons between different departments' modes of spending.

In the Medical sector, 62.6 per cent of expenditure was on Services, while 43 per cent of Family Welfare expenditure was in this category. A larger proportion of Family Welfare monies went towards Supplies and Equipment than in the other three sub-sectors. Backward and Tribal Area Programmes utilised

TABLE 9.12

Detailed Breakdown of Revenue Expenditure on Health, by Heads of Expenditure, 1979-80

	Medical	*Family Welfare*	*Public Health & Sanitation*	*Water Supply & Sewerage*
Total (Rs. Crores)	692.84	118.94	198.47	263.29
	%	%	%	%
Services	62.6	43.0	—	—
Education Research & Training, and Statistics	13.3	9.7	8.8	2.6
Insurance & Other Health Schemes	13.5	—	—	—
Indigenous Systems of Medicine	5.7	—	—	—
Administration	2.1	8.0	12.8	8.3
Supplies & Equipment	2.1	9.7	3.0	2.3
Maternal and Child Health	—	1.3	—	—
Compensation	—	2.2	—	—
Backward and Tribal Areas	0.3	0.9	0.9	15.9
Transport	—	3.1	0.5	—
Prevention & Control of Disease	—	—	67.8	—
Food & Drug Control	—	—	2.4	—
Rural Water Supply	—	—	—	44.6
Urban Water Supply	—	—	—	19.1
Sewerage	—	—	—	1.9

Source : Ministry of Finance (1984) *Combined Finance and Revenue Accounts.*

under 1 per cent of Medical, Family Welfare and Public Health funds, but 16 per cent of Water Supply expenditure was in these areas. "Administration" of Family Welfare, Public Health, and Water Supply programmes consumed substantial proportions of their respective funds, in contrast to the Medical sub-sector. Such comparisons permit an estimation of the extent to which funds in different sub-sectors are well utilised (or, at least, well accounted.) It is clear that while Services utilise the bulk of resources in each department, other items such as Administration, Insurance Schemes, Education, etc, are also voracious 'consumption items.'

However, in this type of categorisation, the dividing lines are often unclear so that caution must accompany inference. For example, it may not be strictly appropriate to consider expenditure on Rural Health limited to that under the Minimum Needs Programmes, as I have done earlier, because other accounts also contribute to health care in rural areas. A major 'problem' is created by the fact that the Family Welfare budget pays for some inputs that are part of rural health care, notably in MCH programmes. The importance of this contribution must be assessed, which can be done from 'broken down' Family Welfare budgets (Table 9.13).

The breakdown shows that 33-38 per cent of the Family Welfare budget went towards Rural Family Planning Services, 2-3 per cent to Urban Services, 33-35 per cent to Education, Training and specific contraception schemes, about 7 per cent to Administration, 13 per cent to Transport, and 10-12 per cent as Compensation. Only 5-7 per cent of the Family Welfare budgets were spent on MCH during these two years, suggesting that the direct contribution of this department to rural health care is relatively small.

LOOKING AHEAD

What are the prospects for health from the Seventh Plan period which will take us up to 1990, leaving only ten years for "Health for all by the year 2000?" (Table 9.14). The Working Groups set up by the Planning Commission advocated an expenditure of almost Rs. 14,000 crores on Health and Family

TABLE 9.13

'Disaggregated' Family Welfare Budgets, 1977-78 and 1978-79
(Rs. lakhs)

	1977-78		1978-79	
Direction & Administration : Total	747.67	(7.5)	819.75	(6.7)
Ministry of Health & Family Welfare	18.00		18.75	
Headquarters	36.92		43.00	
Regional	45.62		48.00	
State	647.13		710.00	
Rural FW Services	3783.96	(38.0)	4085.00	(33.4)
Urban FW Services	280.00	(2.8)	310.00	(2.5)
	Plan	*Non-Plan*	*Plan*	*Non-Plan*
Maternal and Child Health : Total	558.35	(5.6)	849.45	(6.9)
Immunisation	124	124	145.5	145.00
Prophylaxis	154.35	156	277.45	280.00
EPI	—	—	1.00	1.00
Transport	308.50	(3.1)	345.00	(2.8)
Compensation	1000.00	(10.1)	1500.00	(12.3)
Other (Post Partum Programme, IUDS, etc) Mass Education Training, Research and Statistics	3270.26	(32.9)	4318.16	(35.3)
Total	8977.03	971.71	11093.39	1133.97
	9948.74	(100)	12227.36	(100)

Notes : Figures in Brackets are percentages of total expenditure on that item.
Source : Ministry of Health and Family Welfare (1979) ***Performance Budget***.

TABLE 9.14

Seventh Plan Allocations to Health and Family Welfare
(*Rs. Crores*)

	Working Group Reports	*Steering Committee*	*Ministry of Health & Family Welfare*	*Planning Commisssion Final*			
Health	3479 (25.0)		3393	2496 (States & UTs)	1063	MNP	
				897 (Centre)	1320	Hospitals, etc.	
Family Welfare	6657* (47.8)		3256				
Benefits for FP Acceptors	3800 (27.3)						
Total : Health + Family Welfare	13936 (8.3% of total Plan)	10900 (6.1%)	9000 (5.0%)	6649 (3.7%)			
Total Plan Outlay	180,000						

Notes : *MCH, Rs. 174 Crores ; EPI, Rs. 80 Crores; Total Rs. 254 Crores=1.8% of Total allocation to Health and Family Welfare.
Source : Planning Commission (1985).

Welfare in the Seventh Plan—8.3 per cent of the total Plan outlay. Of this, 27 per cent was to be set aside for compensation to Family Planning acceptors and 48 per cent for the Family Welfare department (of which about 2 per cent of the total allocation was to be for MCH programmes, including Immunisation). The remaining 25 per cent was allocated to Health.

However, these amounts were whittled down in the 'iterative' planning process—by almost 22 per cent at the "Steering committee" level, down to less than two-thirds at the stage of the Ministry of Health and Family Welfare's proposal, and to less than half the original figure at the Planning Commission's final submission. Of the Rs. 6649 crores finally approved, 51 per cent is for Health. The States' share in the health budget is almost 74 per cent. Of the States' share, 43 per cent will go to the Minimum Needs Programme for Rural Health (equivalent to 31 per cent of the allocation to Health and 16 per cent of the total Health and Family Welfare allocation). The other half of the total allocation is in the Family Welfare category which is Centrally-funded. The total amount accounts for 3.7 per cent of the total Plan outlay of Rs. 180,000 crores. These figures lend hope both to the health budget and to rural health expenditure.

To assess the situation *vis-à-vis* Non-plan funds, one can examine the report of the Eighth Finance Commission (1984) which will be in effect during the Seventh Plan period. Taking cognisance of inter-state differences, the report noted: "To improve the standards of service rendered in the States marked by low expenditure levels on medicines and diet, it was felt that the expenditure on medicines and diet should be stepped up to the level of all-states average." They then took into account the total expenditure incurred by the States and worked it out on a "per bed per annum" basis. However, although the Commission made provisions for the lower-than-average States to receive additional funds, it restricted the amounts, apparently assuming that the norm set by the previous (Seventh) Finance Commission had been met by all the States. This procedure will again fail to even out existing state-level differentials in health expenditure.

Thus, while slightly increased Plan allocations for Health hold out hope for rural health care in the Seventh Plan period, no change seems to have taken place in the Finance Commission's approach and combined Plan and Non-plan funds may not effect significant improvement in health care.

Private Health Expenditure

The total financial resource base for health care includes public and private spending. However, data on the latter are difficult to obtain. Although governmental health budgets are 'accountable,' there is no mechanism to aggregate private health expenditure. Studies by bodies such as the WHO have suggested a ratio of 1:4 for public:private health expenditure among developing and developed countries in general (WHO, 1980). In India, private health expenditure is estimated to be about three to four times government spending in this sector so that about 2 per cent of the country's gross national product is spent on health care in the country. For example, the 28th round of the National Sample Survey estimated that public expenditure on health in 1973-74 was Rs. 280 crores while private expenditure was Rs. 843 crores, accounting for 25 and 75 per cent, respectively, of the total (NSS, 1976). (In contrast, the relative proportion of private to public spending on education was 79:21.)

Antia and Batliwala (1977) estimated that the nation was spending Rs. 300 crores annually on private medical consultations alone. In addition, the Pharmaceutical Producers of India estimated an expenditure of Rs. 7.50 per caput per annum on allopathic drugs *i.e.* a total of Rs. 450 crores, of which one-third were individual purchases. These two estimates add up roughly to the governmental per capita health expenditure in that year. If one added to these the costs of private hospital care, employee insurance premia, and so on, private health expenditure per caput would indeed be several times the public figure.

If macro-level data are deficient, micro-level studies of personal or household health expenditures are few and far between. Available ones reveal high per capita expenditures on

health care even among poor rural families. For example, Nichter (1980) gathered data on the health expenditure of 82 poor rural families in South Kanara district, Karnataka. He found they spent almost 7 per cent of their mean annual incomes on health care, amounting to about Rs. 270 per family per year, or Rs. 45 per caput if one assumes an average family size of 6 persons. (This is almost double the per capita health expenditure of the government). Over 60 per cent of family health expenditures went for private allopathic consultations and drugs, and a further 35 per cent on traditional practitioners. In another group of 20 families living within a five-kilometre radius of a Primary Health Centre, the per capita expenditure was only slightly lower at Rs. 34 per annum. (About 5 per cent of the expenditures of both groups were on "government doctors.")

In a study of 25 families in each of two villages in U.P. in 1980, the Operations Research Group estimated per capita annual health expenditures of Rs. 83 and Rs. 121 in Eastern and Western U.P., respectively (not including "high" amounts spent on surgical care in some instances) (Khan *et al.*, 1982). The government health expenditure in the State at that time was Rs. 11.7 per caput per annum.

Some private consumption expenditure figures on "Medical Care and Health" are also available in the National Accounts Statistics (Table 9.15). During the 1970-71 and 1980-81 period, between 1.9 and 2.5 per cent of total private consumption expenditure was spent in this sector. At constant prices (1970-71), the figures were slightly higher, averaging 2.7 per cent over the period.

All these data serve to illustrate the importance of private health spending, and to point out that government expenditure in the health sector is a small proportion of what is spent *in toto*. These are important considerations when future financial needs in the health sector are discussed. However, before turning to 'future needs,' I should briefly summarise the past and present picture of health financing and resource allocation.

TABLE 9.15

Private Consumption Expenditure on Medical Care and Health (1970-71 to 1980-81)

	At Current Prices		*At 1970-71 Prices*	
	Rs. Crores	*Per cent of Total Expenditure*	*Rs. Crores*	*Per cent of Total Expenditure*
1970-71	612	2.0	612	2.0
1974-75	1056	2.0	906	2.9
1975-76	1187	2.2	932	2.8
1976-77	1369	2.5	951	2.9
1977-78	1458	2.3	981	2.7
1978-79	1508	2.2	1000	2.8
1979-80	1567	2.1	1048	2.9
1980-81	1717	1.9	1078	2.7

Source : Central Statistical Organisation (1983).

SUMMING UP

The following points about public health care financing emerge from the foregoing exposition:

Small allocations. The health sector gets a very small proportion of the government budget whether one considers Plan allocations, total expenditure, Development or Social and Community Services' expenditure, consumption or capital investment, or the proportion of GNP spent on health. This is true both at the national and state levels and reflects the low priority given to health.

Declining trends. Although outlays may have increased in absolute figures, the proportion of Plan investment in health care declined through the first six Plan periods, especially after Family Welfare expenditures came to dominate the field, beginning with the Fourth Plan. To some extent the picture has changed with the Seventh Plan. Allocations to Water Supply and Sanitation have risen dramatically but until the Sixth Plan these were largely for urban areas. In any case Water

Supply and Sanitation is a capital-intensive sector. During the Sixth Plan, health expenditure also declined as a per cent of Development expenditure. While the 'growth' rate of current expenditure in the health sector has been better than that in some other sectors, the rate of growth of capital investment has been comparatively low. These declining trends are discernible despite the difficulty of making comparisons over time which is engendered by changing definitions and budgetary categories. It should also be noted, parenthetically, that data from different sources are often inconsistent.

Low per capita health expenditure. As a result of the 'small allocations' and 'declining trends,' per capita health expenditure in India remains low compared with many other developing countries.

Centre-State division of responsibility. As health is a State subject, most expenditures are incurred by State governments, usually being Non-plan Consumption expenditure. Only one-third has been Plan expenditure, and very little on Capital account. The Centre's share in health sector outlays increased in the Fourth Plan, but has been about one-third of the total in the last two Plan periods. The different 'interests' of the Centre and the States may make for poor implementation of Centrally-sponsored schemes (such as the CHW Scheme) and a lack of State-level commitment to them.

State-level inequalities. Because of differing levels of commitment on the part of State governments, wide variations have emerged in the per capita health expenditures of the States, in the proportion of State resources committed to health, in their modes of finance, and particularly in their capital investments in this sector. Generally, the States with high per capita expenditure levels have high capital investments suggesting that they may still be in the infrastructural development stage in health service provision. Relatively low consumption expenditures do not bode well for continued commitment in the health sector.

Neither the Planning Commission's nor the Finance Commission's allocation procedures, which are largely 'stochastic' in nature, have helped to iron out these differentials, nor have grant-in-aid mechanisms been used to do so. As a result,

certain States consistently lag pitifully behind even the national averages—generally, the poorer and larger States of the country, perpetuating the vicious cycle of poverty-ill health-lack of health care-high mortality and high population growth.

Inappropriate intrasectoral distribution. Both Central and State government allocations (but particularly the latter) tend to favour the Medical sector over Rural Health care (although there are, again, wide variations among the States). Family Planning emerges as the most 'preferred' sub-sector, followed by Hospitals and Dispensaries, Communicable Disease control, Rural Health and then Education and Training. Even following national 'commitment' to rural health care in the form of the Policy Statement, Sixth Plan allocations were skewed toward the urban sector, rural health getting less than half the per capita outlay of the health sector as a whole. Proposed Seventh Plan allocations while hopeful for future trends, do not rectify this situation adequately. However, some of the accounting categories are overlapping or 'fuzzy' and their aggregation makes it difficult to study exactly what is spent on different services.

Poor utilisation of funds for rural health. Compared with the Hospitals or Medical Education sub-sectors, funds for Rural Health or for Maternal and Child Health are slowly and not fully utilised, resulting, in turn, in low subsequent allocations which prohibit the improvements required in Rural Health services.

Targets not met. Inadequate resources allocated in the first place, coupled with their poor utilisation results in the lack of achievement of targets set independently of the financing process.

Local level spending: "a pork barrel?" Even within the resources utilised, the achievement of targets is poor. While the data on spending by local bodies may be questionable in quality, they tend to prefer the 'capital-intensive' sectors, notably Water Supply (in urban areas) and Medical care. The extent to which monies are being spent on 'viable' infrastructure and purposeful services must be investigated.

High private spending. Private health expenditure is at least three to four times that of the government's, reflecting the demand for health care. However, at the same time, govern-

ment services are 'underutilised' for reasons of inaccessibility, inappropriate staffing and staff training, inefficiency and poor logistics. Despite the widespread public infrastructure, a higher proportion of health services are provided by the private sector than by government facilities. There is also inadequate coverage of the population with 'outreach' schemes eg. immunisation. This and the "wastage" that occurs suggest that government monies and facilities should be more effectively targeted at those whose health needs are not yet being met, i.e. the poor, leaving the rich to use private services which they can afford.

Future Needs

Future needs in the health sector involve a variety of issues. First, the 'cost' of primary health care must be estimated and the capability of the health sector to meet this cost assessed. Second, alternative financing mechanisms must be discussed in order to evaluate the role of public finance. Third, given a role for governmental health financing, the crucial requirements for health resources to effectively cater to health needs and possibilities, must be pointed out.

Cost of Primary Health Care

The term "Primary Health Care" generates some confusion when financial requirements for it are being considered. On the one hand, primary health care is considered "low-cost" per unit and highly cost-effective. On the other, it calls for universal coverage of a population, and so large allocations are required. While health ministries and implementing bodies may recognise it as an additional set of activities which requires more resources to be allocated, especially in view of existing infrastructural deficiencies, budgeting bodies such as the Finance Ministry or Planning Commission may view it erroneously as requiring no more or few additional resources (or even fewer in real terms), considering it more a question of "organisation and management," which are presumed not to require any funds.

In order to assess whether available public health resources are adequate for the provision of primary health care

throughout the country one can only resort to comparisons between current per capita health expenditures or total health allocations and the estimated costs per caput or in toto of delivering primary health care services. Unfortunately, even such comparisons are fraught with danger because of the nature of primary health care (eg. the need for "intersectoral action") and because of the current distribution pattern of health expenditures, issues to which we shall turn later.

An estimate of the cost of providing *basic* health care to the poor in developing countries by the year 2000 was made by the World Bank in 1977 (World Bank, 1980). At 1975 prices, this worked out to US $5 per capita. It included the capital cost of a health facility for every 8000 to 12000 people or at every ten kilometres (whichever is greater), and the cost of training a community health worker for every 1500 to 1200 people. The estimate excluded health workers' salaries, administrative overheads, the costs of supplies, in-service training, training and referral facilities, and allied needs such as transport, communication etc. It excluded other items which are considered part of "total primary health care" notably, water supply and sanitation and nutrition. In contrast, the national per capita health expenditure in 1975-76 was Rs. 10.63 in India, or about one-fifth the then estimated cost of primary health care.

Another estimate was made by Joseph and Russell (1980). For low income-countries including India they estimated "start-up" costs of $1-2 per caput per year for five years, and additional operating costs of $1-1.5 per caput per year for 10 years, at 1978 prices. Similar figures were arrived at by Evans *et al.* (1981), who estimated the cost of basic "selective" primary health care as $2 per caput per year. Even if the lower figure of $1 per caput per year is taken (and not adjusted for inflation), this would mean that an outlay of Rs. 4500 crores would have to be made for the current national population of 750 million people in the forthcoming Five-year Plan for primary health services *alone*. This amounts to an additional one-third of the total Seventh Plan outlay for Health and over four times the allocation for Rural Health. Needless to say, even though a considerable amount of the 'infrastructure' for primary health care already exists in the country, and Non-plan funds would also be available, the total availability for primary health

services is likely to be far short of these estimated needs. The additional requirements, however, may be well within the country's financial capability, given the current low proportion of investment in the health sector.

In fact, Antia and Battiwala (1977) worked out an estimate of annual expenditure for a basic health infrastructure proposed by them. The structure consisted of two CHWs per 1000 people, two MPWs per 5000, and a Health Assistant for every 10,000 people. Including their stipends and the cost of basic medicines and supplies (at Rs. 2.50 per caput), as well as Transport and Administrative Costs, a total of Rs. 8 per capita was obtained. If the costs of referral facilities were included, the estimated per capita cost rose to about Rs. 20 per year. This was somewhat higher than the national per capita health expenditure in 1977-78, which was Rs. 15.05 per annum.

Another way of estimating the cost of providing primary health care is to examine the expenditures of small-scale programmes that have delivered such services effectively. Although this approach is not without its shortcomings (which are discussed at length in Chapter 6), it is useful to approximate financial needs.

For example, the Narangwal Project cost between U.S. $1.50 and $2.00 per caput per annum (from 1968 to 1973) including both capital investments and recurring costs but excluding the research component) (Pyle, 1981). A similar figure ($1.25-$1.50) was estimated at Jamkhed around 1976. However, the Comprehensive Health Service Project in Alibag, Maharashtra, estimated the cost of providing basic preventive and curative care at the primary level as low as Rs. 5 per capita in that year. If block-level facilities were included, the cost rose to about Rs. 10 per caput per year. More recently, the costs of the primary health and development programme at K.V. Kuppam in Tamil Nadu have been calculated as Rs. 80 per family per year—or about Rs. 15 per head (RUHSA, 1982). The 1981-82 per capita national health expenditure figure was Rs. 27.86.

One might extrapolate from these various estimates of the cost of primary health care to suggest that a per capita allocation of Rs. 20 per year is the minimum currently needed for basic health care to be provided. Even though the national

per capita health expenditure figure exceeds this, the current intra-sectoral distribution pattern would require the government to step up its allocations to the health sector in general and to basic services in particular.

As stated earlier, public health expenditure currently amounts to about 0.6 per cent of GNP and to not more than 20 per cent of total health care consumption expenditure in the country. One can briefly compare these levels of expenditure with a spectrum of other more developed countries. At one end of this spectrum is Sweden where health care accounts for 7.3 per cent of GDP and is 92 per cent state funded. On the other hand, in the U.S., private expenditure accounts for 60 per cent of total health expenditure, which is 7.4 per cent of GDP. In Spain, Greece and Japan, the per cent of GDP in the health sector is around 4 (roughly double India's) and in the former two countries, two-thirds is public expenditure, while in Japan almost 90 per cent is government financed. These data would suggest that the "development" of health services in India would call for health care to account for a larger percentage of the GDP and particularly for the government to increase its contribution to at least 2 per cent of GDP.

As if in corroboration, Gwatkin, Wilcox and Wray (1980) estimated that private voluntary projects of some effectiveness in different parts of the world cost (per caput) about 1-2 per cent of the country's per capita GNP. This was upheld by Pyle and Chowdhury (1980) whose study of seven voluntary agency projects in Bangladesh revealed per capita cost levels of about 1 per cent of per capita GNP.

While these programmes are admittedly more expensive than government health services, they are considered more effective in terms of bringing about health improvements. Although their impact data is insufficient to calculate 'cost-effectiveness,' in some instances private agencies have supplemented government budgets to enhance the effectiveness of public services, and such data are of some interest. For example, in the Integrated Health Project at Miraj in Maharashtra about three-fourths of the total costs were met from government funds, while one-fourth was additionally provided (Ram, 1980). Although 95 per cent of government funds were allocated to salaries these were supplemented by a further 26 per cent from

private sources. In addition, private funds were used for medicines and supplies, transport, training, and so on. A 'functional analysis' of a health centre carried out in the Narangwal Project showed that 75 per cent of allocated funds went to salaries, 10 per cent to drugs and supplies, and the remainder to transport, etc. In contrast among private primary health programmes, budget breakdowns usually show about 50 per cent allocated to salaries, 25 per cent to medicines and supplies, and 25 per cent to transport and other items. This information suggests that government funds must be both supplemented and reallocated at the primary level to provide better basic health care.

Alternative Sources of Funds

A declining interest on the part of government in financing health care clearly jeopardises the promise of "health for all." It has been stressed that progress towards this goal will require increased resources to the health sector as well as reallocations. However, there has been a climate of questioning whether governments should finance public health systems entirely from their budgets or seek 'alternative' financing mechanisms. It may, therefore, be useful to consider other sources of funds for primary health care, such as "community contributions" and external assistance. The crucial issue is whether funds obtained from these sources could mitigate the current picture of inadequate finance for rural health care.

Community financing of health care. The goal of raising local resources is often seen as a way of relieving government from certain expenditures borne at the grassroots, and ultimately even of responsibility for health care at this level. For example, according to Gish (1983) ". . . by implication, if not explicitly, health care is expected to remain or become an essentially private transaction between providers and consumers, thus relieving the state of its responsibilities in this area except for some carefully selected activities." Indeed, a World Bank publication has argued "present health financing policies in most developing countries need to be substantially reoriented. Strategies favouring public provision of services at little or no fee to users and with little encouragement of risk-sharing have been widely unsuccessful" (de Ferranti, 1985). Thus,

discussions of community financing of health services have concentrated on the recovery from users of the costs of health care either through fees-for-service and/or health insurance schemes. Several arguments are used to support such cost-recovery strategies. The "efficiency" argument maintains that the 'wastage' in public health systems will be minimised by the greater accountability of a paying system through better management and better allocations. The "equity" argument holds that the current maldistribution of health resources favouring the better off is reinforced by a totally public financial system.

However, experience at the micro-level in India (described in Chapters 5 and 6) has shown that levying fees-for-service ultimately excludes those who are most in need of health care. A curious anomaly might arise in that the poor who are ill most frequently would have to pay the most in fees if they no longer had the option of free services! In practice community "contributions" tend to reflect the capacity of contributors to influence decision-making and benefit from the health services, rather than increase participation as is desired. Further, even if the nature of demand is affected, it is not clear that supply would improve in quantity, quality or efficiency. Inevitably, only a very small proportion of the costs of supplying services are raised by health insurance schemes, user fees, or both. Contributions are episodic in nature. There are costs associated with collecting them, so that neither equity nor efficiency may be achieved. Although seeking community finance may generate 'externalities,' such as greater interest on the part of the public in the services provided, the extent to which these would be of real benefit to health status is unknown.

Raising local resources also has implications for the mix of health activities. While fees can be charged for curative care, they are difficult to levy on preventive services. And yet the latter are necessary and require sizeable allocations of funds. As described in Chapter 6 on the Role of Private Voluntary Agencies, under these circumstances, curative care begins to consume the lion's share of resources generated, and overtakes preventive care in terms of the importance accorded it by providers and consumers alike.

However, one suggestion has been that users should bear a larger share of health care costs with discrimination among

types of services. De Ferranti (1985) admits that preventive services should remain government's purview, but he states that curative services can be indirectly financed and regulated by government, rather than directly provided. Accordingly, he has proposed the institution of "efficiency pricing" for curative services. However, besides discriminating against the poor—who also, especially, need curative care, this approach would still require government to provide considerable resources to curative care for, while marginal costs (*e.g.* of drugs) may be met, capital expenditures, salaries etc. would have to be 'guaranteed.' Thus, a strategy to raise local resources may be somewhat opposed to the need to reallocate government funds in accordance with primary health care objectives. The misallocation of funds within the health sector to date causes, to a greater degree, the lack of success of government health programmes than does its failure to raise funds from users.

In sum, discussions of the 'potential' for community financing of primary health care seem to ignore the fact that the people most in need of health care are the poorest, and that preventive care is also important. Given that the poor make up 40 to 50 per cent of the country's population and that current health care allocations would be hard pressed to meet even their needs, community financing would seem to be a fallacious concept.

A final salient point is that local-level organisations currently have no constitutionally-defined power to raise resources (even if they have the comptence). This would present a problem if health care is singled out to be financed and managed by local bodies. Thus far, the flow of financial resources has been downward—local bodies have received financial assistance from state governments, analogous to Centre-State flows. In the absence of a comprehensive review of this system, it is difficult to see how ideas of local-level health financing and budgeting can be implemented.

External assistance. Another way of financing increased health care needs is by seeking additional external aid for health programmes. Some issues surrounding this mechanism will be discussed.

As the Constitution (Articles 292 and 293) prohibits States from entering into their own dealings with external assistance

agencies (Central Law Agency, 1981), foreign aid from bilateral and multilateral donors is provided to the Central government to be passed on to the States for use in specific sectors or projects. Such funds are subject to the usual procedures governing financial flows between the Centre and the States. The foreign aid received by the Centre for a project is added to total Central resources and disbursed according to the Gadgil formula to all States. The project State receives 70 per cent of the foreign aid allocated to the project (Wallich, 1982). In addition, the Central government gives the States "matching assistance" for such projects as a means of providing incentives to them to undertake foreign-aided projects. Therefore, the participating State ultimately gets an amount slightly larger than the original project budget. Project selection and planning are undertaken jointly and even implementation may depend on the specific fiscal arrangements.

Thus, generally, in the sectors where the Centre normally plays a less regulatory role (including health) external assistance permits it to exercise 'control' over the States. While the funds may 'increase' State health expenditures, they do not represent a State's greater commitment to health and so may have an opposite effect on a State's responsibility. In particular, the "incentive" to undertake foreign-aided projects as well as the relaxed expenditure norms that come with such schemes may serve to reduce State accountability in health.

The same may hold true at the national level particularly since external aid permits fungibility in government finances. Thus, the major questions that need to be examined about external assistance to the health sector are : (1) Are the funds used in areas which are in keeping with national health goals, objectives, priorities and norms? (2) Does the receipt of aid decrease internal 'commitment' to these areas or does it permit larger allocations than would otherwise occur? i.e. Does external aid increase spending in the health sector? (3) Does aid increase the 'dependency' of the national health sector on foreign funds or institutions or improve the performance and viability of our own? There are no simple answers to these questions, but a brief examination of past and current aid to the health sector may provide some clues.

In the past, external aid to the health sector has primarily

supported the Communicable Disease (particularly malaria) Control and Family Planning programmes. Up to 1979, the period of greatest assistance was 1965-69, the hey-day of malaria eradication and of Family Planning infrastructural expansion. The U.S. Government was the major donor, being responsible for almost 75 per cent of aid to the health sector between 1950 and 1974. It channelled over 80 per cent of its 'technical assistance' (and half of PL-480 rupee funds) in the health sector into the malaria programme (Jeffery, 1982). The proportions to Family Planning are somewhat more difficult to compute, in part because of the overlap between the Health and Family Planning sub-sectors but also because of the inadequate specification of budgeting categories in donors accounts. Only 6 per cent of U.S. government technical assistance between 1950 and 1974 would appear to have been spent on Family Planning. The other major donors during that period were UNICEF and WHO (whose assistance was not broken down separately into a Family Planning category) and the Ford and Rockefeller Foundations which together contributed only about US $ 10.7 million between 1950 and 1974, amounting to less than 4 per cent of total aid (excluding PL-480) to the health sector in that period. (This does not include aid from other foreign non-governmental donors who do not channel their assistance through government but deal directly with private organisations they fund). While it is true that the majority of funds spent in the health sector by the Ford Foundation went toward population assistance, the total amounted to just over 1 per cent of external assistance to the health sector. The UNFPA entered the Family Planning aid arena in 1971 and provided about US $ 47 million between 1971-79. Besides contraceptive and sterilisation schemes and population education, these funds also supported ANM, *dai* and MPW training. Its assistance in those years amounted to about 22.5 per cent of total health sector aid.

Besides malaria and Family Planning, other Communicable Disease programmes (such as TB and smallpox) received a sizeable chunk of foreign assistance eg. about one-third of WHO funds between 1947 and 1979. Water Supply and Sanitation captured 3.3 per cent. Finally, Medical Education, Biomedical Research and Health facilities directly received about 1.5 per cent of total aid.

These data suggest that health aid between 1947 and 1979 supported those areas that were deemed important both nationally and internationally at the time. Admittedly, international thinking backed up by aid funds may have influenced national priorities to the detriment of internal health development. It is well known that the external aid was used primarily to purchase 'hardware'—buildings, equipment, supplies, vehicles and so on. In fact, the lack of attention to 'software' (with the exception of training of professionals in some fields) is considered the major reason why both the Family Planning and Communicable Disease programmes failed to achieve adequate impact despite sizeable allocations. However, as Jeffery (1982) has suggested, the predilection for technical aid may have been as much that of national decision makers as of foreign aid agencies, for 'hardware' is generally considered less "threatening" and more desirable. In sum, while external health aid has supported 'national priorities,' it has perhaps been inadequately tuned to the national context.

Because of the manner in which aid funds are received and disbursed by the Central government, it is difficult to say whether the allocations to the health sector were "additionalities" or whether they simply substituted local government funds that would have in any case gone to those programmes. Health aid from 1947 to 1974 actually accounted for only about 10 per cent of health Plan expenditures (and only 3-4 per cent of total external assistance to the country) (Jeffery, 1982). The impact of this aid on the size of allocations cannot be considered significant and the fungibility brought about by it is also unlikely to have had much effect on other sub-sectors. As Jeffery has pointed out, its size was not to the scale of extant problems so it was limited in what it could achieve.

More recently however, there have been a few changes in the aid arena which could modify some of the above conclusions. There are many more donors to the health sector today than there were up to the mid-70s. This has meant a large increase in the amount of aid, and a diversification in activities and programmes funded. For example, between 1973 and 1983 15 per cent of Plan expenditure in the Family Planning sub-sector

came from external assistance received from 10 major donors (Ministry of Health and Family Welfare, 1983).

A signal qualitative change in external health aid has been the funding of "Integrated Rural Health and Population" projects in place of earlier concentration on vertical disease control and Family Planning programmes. It has been alleged that this is simply "old wine in new bottles" (Banerji, 1983a). Indeed, the bulk of over $250 million that was contributed by five donors to such projects between 1980 and 85 went towards infrastructure, although, somewhat greater attention was paid to 'software' than previously. However, given the small total allocations to rural health, sizeable external assistance in this category may not be an entirely happy trend. National and particularly state-level involvement in implementation may suffer from all the problems attendant on foreign aided projects and "model" schemes.

Besides these "area projects," Communicable Disease programmes, contraceptive delivery, prevention of blindness, health research, planning and administration and child health and nutrition also receive assistance from foreign donor agencies.

Some other new trends in the area of health sector aid must also be mentioned. This has resulted largely from greater pressures on donor agencies in their countries of origin to formulate specific objectives for their aid, to introduce mechanisms to achieve these objectives, and to monitor and evaluate the effectiveness of assistance. Project funds are generally smaller packets of aid tied to specific, time-bound objectives and actions. There is less flexibility in how aid monies are spent, and "monitoring and evaluation" have become an indivisible part of project assistance.

The proliferation of donor agencies has engendered a wide variety of objectives and approaches and this has led to two parallel developments. There has been a tendency on the part of government institutions to devise projects to fit in with donor requirements rather than those that reflect true national or local priorities and needs. At the same time, donors have begun to seek clients outside of government. While foreign non-governmental agencies have a long history of support to private health institutions in India, assistance from bilateral and multi-

lateral donors was traditionally directed at the public sector. More recently, some aid agencies set aside funds for the private health sector (although these may be channelled through government). Accordingly, a large number of non-governmental agencies have come under their umbrellas and it can perhaps be said that the proliferation of 'packets of aid' has led to a proliferation of voluntary agencies! Many of these have become 'visible' in part because they have attracted foreign funds; many would have difficulty surviving if it were not for such funds. While these considerations have been discussed in Chapter 6 it is pertinent to note here that this practice is part of the overall trend to "privatisation," which may have significant—negative—impact on government health spending in the long run. In the short run, it is perhaps more closely linked to the issue of "dependency" which has been explored in Chapter 2.

In sum, qualitative considerations are perhaps more important than quantitative ones in the matter of health sector aid, and one might conclude that neither community financing nor external assistance could contribute substantially to the financial requirements for primary health care. The only "alternative" then is to pay greater attention to the major problems that afflict government financing of the health sector. First, there is the scarcity of funds. The financial resources currently available cannot provide universal primary health coverage in the country. Second, the distribution of funds is inappropriate considering extant health problems and inequalities. Third, available funds are being utilised poorly because of overlaps between programmes, budgeting categories, "pork-barrels," and so on. While the first problem requires the health sector to be viewed more favourably by institutions such as the Finance and Planning Commissions, the second and third issues require financing and expenditure within the health sector to be reorganised. The two arenas are of course interrelated because rational use of resources within the health sector may be a condition for increasing allocations to it. These requirements are considered below.

Requirements

Larger allocations. The implementation of primary health care clearly requires the allocation of additional financial

resources to the rural health sector, and particularly to community-level health activities. Despite the priority given to Rural Health and Primary Health Care in recent policy statements, the Sixth and Seventh Plan outlays do not reflect an adequate commitment. The allocations to Maternal and Child Health remain meagre in spite of the importance of this programme.

Not only are policy priorities not reflected in allocations, but there may also not be adequate correspondence between sectoral targets set by the Plans and allocations of financial resources for them. While the latter are subject to the 'iterative' planning process, the former are laid down by national policy. While the Policy Statement refers to the need for reorganisation, it makes no mention of the need to increase the quantum of finance to the health sector. If this is erroneously construed as permission to financing bodies to 'freeze' allocations until "reorganisation" occurs, little headway is likely to be made towards policy objectives. Persistent incongruity between targets and resources will lead to a situation in which the health sector becomes demoralised and targets are simply 'met on paper.'

Currently different government departments "compete" with one another for budget allocations. While health policy recognises the need for coordination between Health, Family Planning, Water Supply and Sanitation, Education, Food and Agriculture, and other sectors, they fail to coordinate and collaborate to optimise use of their funds, manpower and physical facilities. Since health improvement also requires socio-economic development, resources in related sectors must be assessed and allocated to areas which are identified as producing health benefits. While socio-economic development may be necessary to generate the resources to improve health, a healthier population will also contribute to national development.

Reallocation of resources. The planning process has also failed to ensure the "best" use of available resources. Within the health sector, the majority of funds go toward medical/curative care. Family Planning outlays are mostly for services and incentives. Only 3 per cent of the total Sixth Plan allocation to Health, Family Welfare and Water Supply and

Sanitation went to MCH programmes. Although paramedical training is an acknowledged need for the expansion of primary health services, only 0.1 per cent of the total allocation in the Sixth Plan went towards training ANMs and *dais*. In their study of Maharashtra and Gujarat, Khan and Prasad (1984) has shown that these areas do not receive much priority at the state level either.

The need to redistribute funds pertains, of course, to all health sector accounts. Although one would argue that funds must be diverted from the urban hospital sector to rural health services, this possibility is severely limited by "political considerations." The reduction of urban health services is neither feasible nor strictly advisable, given the demand for them by the poor, besides the rich. Thus, the 'redistribution' of health resources is a longer-term goal which can be achieved by the allocation of new resources to the rural health sector. In particular, monies have to be ensured to cover the increasing recurring costs of programmes because these, rather than development costs which are "one-time" expenditures, are likely to be most limiting in the expansion and sustenance of quality primary health care.

Monitoring spending. Because line-item budgets and accounts are aggregated for the entire health sector, and heads of expenditure overlap, it is difficult to discern what is actually spent on specific services. Budgeting categories do not permit the kind of investigations into intra-sectoral allocations that are really necessary, such as comparisons between hospital care and primary care, preventive and curative care, etc. In any case it is admittedly difficult to decide exactly what the appropriate allocations to different health services should be, since the relationship between the quantum of health expenditure in different areas and health outcomes is unclear and, most likely, affected by a host of other intermediate factors. "Cost-effectiveness" and "cost-benefit" are difficult to determine because major health goals (such as mortality reduction) require long-term investments, while intermediate achievements (eg. reduction of low birth weight) are difficult to measure with accuracy. The unit costs of different interventions have not been worked out and, just as details on the distribution of public funds or even private monies between different health strategies are

unavailable, their effectiveness in meeting health goals is unknown. Nevertheless, experiences at the local level, such as that at Miraj, indicate how government budgets require supplementation and reorganisation in accordance with primary health service needs. For example, the need to channel more resources into areas such as paramedical training and staffing are clearly indicated.

In this connection, 'wise' spending is as important as 'more' spending. While it is difficult to arrive at even a 'guesstimate' of the proportion of funds frittered away in the health sector (because of the lack of information flowing upwards from the block-level on the actual utilisation and achievements of health monies), health expenditures lend themselves to leakages. K.N. Raj (1985) has estimated that one-third to one-half of all development expenditures at the block-level is going into the "pockets of intermediaries." Although this may be an inevitable result of a situation in which resources are planned Centrally but programmes implemented locally, mechanisms must be found to reconcile the dichotomy. Larger allocations should not simply result in larger "pork barrels." Monitoring of expenditure is a necessary step to ensure the effectiveness of allocations to the rural health sector.

Reduction of inequalities. An essential aspect of primary health care is equality of access to health services in relation to need, in contrast with the existing situation in which health care is distributed in accordance with demand. The inequalities identified in health status and health care will have to be systematically reduced by the allocation of resources to priority 'areas' (rural locations, backward States, the primary level of care, vulnerable target groups, and major health problems). To begin with, there is a clear need to equalise state-level differentials in health expenditure, which were discussed at length earlier. One approach may be to equalise the per cent of States' GDPs spent on health, which currently range from 0.7 to 2.0 (Shah, 1980).

The reduction of inequalities in health is essentially a political decision—the benefits of larger, better distributed, and more 'effective' alloc ations to primary health care can be weighed against the 'costs' of ill-health. Although hard data are few, it is widely accepted that the country's high morbidity and disability rates are at least partially responsible for low skills, low productivity in agriculture and industry, and absenteeism among workers. Ill-health among children decreases school-attendance and learning ability and so results in 'wastages' in the education sector. High mortality is clearly a loss to the nation, given the value to society of an individual's future earnings ("human capital"), and also because of its effect on fertility. Thus, the economic costs of low health expenditures are considerable. There are also social and psychological costs—disintegration of families on account of illness, perpetuation of inequalities, and impoverishment due to indebtedness on account of illness. Thus expenditure on primary health care can achieve investment, redistributive and welfare goals. The broader political economy of health involves the social distribution of income, wealth and power, and so equity in resource allocation is an issue for all sectors.

CHAPTER 10

TAKING STOCK

Current health policy in India proclaims "health for all" (GOI, 1982a). While providing hope to those concerned with the country's poor health situation, it poses a series of dilemmas. Any analysis of health policy must confront these dilemmas and delineate the choices for their resolution.

Health Politics

While the health policy Statement notes the many developments that have taken place in the health sector since Independence, it does not take adequate account of the "political economy" of health in the country (Chapter 1). It has turned a blind eye to the political obstacles which have left unimplemented many of the proposals of the pioneering Bhore Committee – and merely reiterated these prescriptions. Unless these inadequacies are redressed now, the Health Policy too will remain unimplemented. For example, the State must pursue more fully its obligation to legislate and implement actions favouring the principle of "ensuring health for all" which has not been adequately observed in the past (Chapter 2). In the future, certain articles of the Constitution should be utilised to promote health more widely and to a greater degree. For example, Article 15, the Right to Equality, which prohibits discrimination by sex and other attributes and provides that the State can make special provisions for women and children,

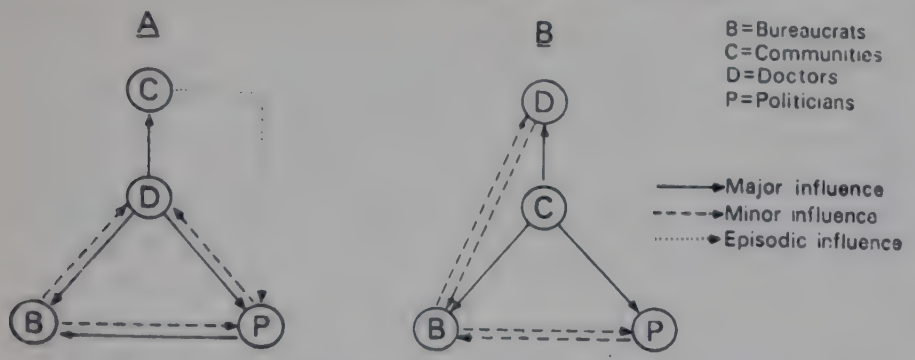
could be used to establish better facilities for these groups which are, indeed, discriminated against in terms of health.

While the framing of a National Health Policy Statement suggests that the ideal of "health for all" is espoused at the national level, the commitment of the States to implementing this Policy may vary widely as it has in the past. Therefore, mechanisms need to be instituted to ensure that *all* States implement the basic health care envisioned by the Policy. The Central Councils must be strengthened so that both 'carrots' and 'sticks' are applied to their recommendations, insofar as these favour the goal of universal health care.

Despite the Constitutional provision for States' autonomy in matters of health, the extant system of planning and financing gives the Central Government some authority over the States, which could be used in the crucial area of primary health care to remove current wide disparities among States. In addition, the "residuary" power of Parliament to legislate on any subject not listed in the Seventh Schedule could be invoked for "primary health care." There are also a number of articles in the Constitution which enable Parliament to legislate on subjects included in the State List (notably Articles 249 and 252), and others that give the Centre power to direct the States to formulate policy [eg. Articles 256, 257, 339 (2), 350A, 353 (a), 360 (3)]. Existing legislation provides health benefits to the organised, urban sector, to the neglect of the rural populace. A collation and review of existing legislation, and new enactments to further the goals of the National Health Policy are clearly indicated. In sum, while 'decentralisation' is a key element for the implementation of primary health care, the 'Centre' cannot abdicate its responsibility to cooperate with the States, to assist them fully, and to goad them where necessary.

Most significant among other political obstacles to the implementation of a primary health care policy is the powerful interest group of medical professionals in both public and private, traditional and modern health sectors, and their related 'ancillary' groups, such as the drug industry. For widespread basic health care to become available, the current system in which doctors influence political decision-making, resource allocations and implementation in favour of "high technology" health care, must give way to one in which consumers' needs

and concerns are given primary importance. 'Paths of influence,' which currently flow as in (A), must change to (B).



Besides requiring considerable attitudinal change on the part of all involved, many organisational changes are called for in the health sector.

Organisation for Health

The most significant feature of health in India today is its gross maldistribution (Chapter 3). While the urban upper and middle classes generally enjoy good health or, atleast, can reach the medical care that will deal with their complaints, millions—even hundreds of millions—of women and children, rural residents, and people below the "poverty line," have neither the 'goods' to maintain health, nor access to the services that could decrease the severity of their illnesses. In many instances the outcomes of those illnesses are unnecessarily fatal. Available mortality data reveal that death knocks disproportionately at the doors of young children, females, and in certain States of the country, particulary those in the 'Hindi belt.'

The greatest challenge of health policy, then, is to eliminate these differences by focusing on the most disadvantaged. Indeed, the health policy rightly focuses on the provision of health 'goods and services' to those who have thus far been without—and so, on primary health care. This can be seen as a task of "redistributing" health, but political exigencies dictate that the levels of health of the upper strata cannot be reduced, and so prevent 'taking from the rich and giving to the poor.' Thus, a "duality" ensues in health policy—it talks of providing 'minimal health care to all' while still maintaining and furthering

the development of "five-star" hospitals and sophisticated medicine. Such multi-level health development has profound implications for health service organisation (including the role of 'actors' outside the governmental health sector), for manpower, technology and research, for health finance, and so on.

The existing health infrastructure reaches down to the village level from Primary Health Centres through Multipurpose Workers and community-based Health Guides. While prescribing the strategies to reach the goal of "universal provision of comprehensive primary health care services" (reorientation, reorganisation, integration), the Policy stops short of developing the necessary interface between health services and clients. Most health functions are vested in the family or household unit, and the role of women in household health is crucial. In the presence of stratifying social structures, while women provide health care *inside* the home, they have limited access to health services *outside*. Thus, health workers must be selected, trained and organised to develop a systematic interface with women by visiting homes on a regular and frequent basis. Their tasks on these visits should be focused on health and not on family planning as in the past (except where this service is being demanded by the client herself). Primary workers must be deployed in sufficient numbers to cover all households at least once a month, as well as to be available at specific times at a given location for 'emergency' and 'group' care activities such as immunisation. Support and referral structures must be similarly streamlined. The creation of cadres without specification of their tasks and linkages is counterproductive. Both horizontal integration of health personnel with people in need of health care, and vertical integration with those who are more highly trained is needed.

A major paradox in the rural health sector is that while there is considerable "unmet need," utilisation of existing health services is inadequate. Thus, policy for rural health has the dual task of improving health services as well as raising demand for 'health.'

Given that social and economic phenomena regulate demand, policy must aim to amend these to favour better health. For example, social constraints to the utilisation of health services, summed up in the lack of "permisson" (Chapter 4), must be

mitigated and eventually removed. Over the short run the approach must be to provide health services in such a way that they are accessible to those in need. Over the long term, "education" must reduce social barriers—education of all members of society, particularly those that 'make the rules' and those that must exercise their rights! While the Health Policy Statement recognises the especially poor health situation of women and children, during its implementation greater attention must be paid to relaxing the social structures that deny them access to health care.

In this context, demand for health services is most often not individually-motivated, but rather is the result of intra-household dynamics. Thus, the creation of demand also requires attention to households.

Decentralisation

In contrast with this suggestion, the Health Policy Statement concentrates on "community" participation as the means to increase demand for health and to decentralise (Chapter 5). While such participation may be desirable, it is difficult to achieve in the context of heterogeneous village communities. Community participation often amounts simply to local compliance with plans and programmes designed externally (eg. by government), decision-making by local power-holders (who in turn benefit most from the programme), or the 'mobilised' participation of labour and resources by local leaders. In most instances, it is a far-cry from the creative involvement of people in health activities that is desired.

The involvement of communities is also sought by the Health Policy because of the potential of their 'contributions' to health care. Resources raised directly from the people in cash or kind would lower the cost of health care to the public exchequer. Community health workers paid 'honoraria' are among such resources. However, experience in the non-governmental sector (Chapter 6) has shown that impoverished rural communities cannot raise other significant contributions. Reliance on community contributions only sets up a double-standard: village-level workers for the rural poor, but continued hospital and specialist facilities for the urban and rural rich.

Ultimately, also, the concern with raising community resources diverts attention from other more fundamental aspects of participation in health—eg. in planning and decision-making. These are difficult to bring about because they entail a devolution of power. In view of this and of socio-economic constraints to "autonomous" participation of the poor in health services, interactions between service providers and people at the household level must take precedence over "community" participation *per se*.

In addition to community participation, the Health Policy Statement advocates decentralisation also through the private voluntary health sector. Privatisation is proposed in both the rural health extension effort, and in the development of speciality and super-speciality services. However, the limited coverage of voluntary health sector programmes makes them less useful to improving national health than is proposed. Their major contribution will continue to be in the area of experimentation with and demonstration of "alternative" approaches. As "collaboration" between the governmental and non-governmental sectors is limited in scope, the government would best reserve its energies to improve its own health efforts and where useful to inculcate the lessons learned privately.

Disseminating Technologies

Besides the three approaches to reorganisation—'epidemiological planning,' community participation and "privatisation," the Health Policy emphasises the "preventive and promotive" aspects of primary health care. This raises the issue of technological needs for implementation of health policy. While the Statement refers to the need to provide laboratory techniques for diagnosis and monitoring in the field, it is silent on the subject of disseminating 'simple' technologies, which are the planks of primary health care. Such technologies have special characteristics and requirements for their spread (Chapter 7). Firstly, a technology is only as good as the system charged with using or delivering it. Primary health technologies will only "make a difference" when requirements and mechanisms for supply, logistics, training and management of workers are

well-worked out. Secondly, a technology is only as 'efficacious' as the social milieu receiving its benefits permits. This in turn implies that the system delivering the technology must be capable of adapting it to the constraints and advantages of "clients," as well as of preparing the 'social ground' for dissemination. Thus, the health delivery system, social organisation, and technologies are intricately linked—and so the implementation of primary health care is by no means "simple."

Development and Health

"Technology" is sometimes pitted against "socio-economic development"—for example, in the argument that modern health technologies weaken the relationship between socio-economic levels and health, so that many of the health problems of the poor can be dealt with now and do not need to await socio-economic improvements (Golladay, 1980). However, the effects of technology and development can also be seen as synergistic. Segall (1983b) has pointed out that mortality rates in developing countries responded more favourably to rising socio-economic levels after the advent of modern health technologies (*i.e.* from the 1960s onwards), than they had earlier. The converse is also true. People are better able to avail of technologies when their living standards are improved; and the capacity of a health system to deliver better care improves with better conditions and greater national 'wealth.' These relationships demonstrate unequivocally that 'social organisation' and a good delivery system are crucial for the effectiveness of technology. If--and only if—they are appropriate and capable, will a health technology improve health at a given level of living.

That ultimate achievements in health are bound up with wider social, economic and political developments is clearly illustrated by the case of Kerala (Chapter 8). The relationship of health and development is demonstrated by Kerala's historical and current contexts. The early development of health services went hand in hand with social and political changes which enhanced their effectiveness. More recently, the abating of positive social (and political) trends and the limitations imposed

by a stagnant economy have prevented further achievements. While Kerala's mortality and fertility rates are the lowest in the country, morbidity and malnutrition remain severe problems in the State. While the synergism between health care, education and women's status is clearly positive, the segregation of the health and nutrition sectors demonstrates the inadequacy of public policy for 'health.' By extrapolation, a regression in Kerala's health status may occur if attention is not paid to important factors such as nutrition and sanitation.

This issue has major implications for the nation as a whole, but has remained largely unaddressed by the Health Policy even though the "integration of health and other development sectors" is the Policy's third and final strategy to meet its goal of universal health care. In simply suggesting "coordinating committees" at ministerial levels, the health policy has failed to secure this plank. More direct linkages between key health inputs such as nutrition and water supply and health services are necessary for improvements in health. Unless the relevant sectors have health objectives and measure their achievements by health parameters, little improvement is likely to occur in the health of the nation at large.

The health system also has a role linked to efforts in other sectors. Just as it is responsible for creating demand for its own services, it must also create demand for 'preventive' measures including 'health producing goods' such as food, water, housing, sanitation, and education. If the poor are erroneously led to demanding *only* health *services*, there will not be much change in their overall health situation, as neither the factors predisposing them to disease nor those constraining their access to health care would have been removed.

Redistributing Health Resources

A major obstacle to implementation of health policy is inadequate resources. The problem is shown clearly by the declining trend in health sector outlays (Chapter 9). The health sector fails to compete successfully with other development sectors and so accounts for only a small percentage of government spending. While it is difficult to estimate the

quantum of financial resources required to implement the National Health Policy, some information available on the costs of basic health programmes suggests that the *per capita* cost of primary health care far exceeds the current allocation in the public sector. Besides the finances to purchase the 'hardware' of health services—buildings, equipment, transport, drugs and supplies, and health personnel, considerable resources will be required to provide the 'soft' inputs for primary health care programmes (training, feedback systems, etc.). Although health policy must of course be implemented "at a cost which the country can afford" (WHO-UNICEF, 1978), the provision of universal health services will not be inexpensive. There are problems inherent in 'reducing' the costs of health care by designing low-cost programmes and by mobilising community resources (Chapters 5 and 6). Neither a double-standard in health care nor exclusion of the needy would serve the intentions of the Health Policy.

The distribution of funds within the health sector has to date discriminated against rural health care and favoured "sophisticated" urban health facilities and family planning. Despite its call for primary care, the Policy has done little to decrease the emphasis on technologic sophistication at the secondary and tertiary levels.

If there is little or no political scope for the reduction of allocations to urban health facilities, then in order to make more resources available for primary health services in rural areas the size of the 'health pie' needs to be increased, and newly-mobilised resources preferentially allocated to the primary rural sector. The critical issue of regional imbalances needs to be addressed by bringing on par at least the per capita *rural* health expenditures of the States. There are several related needs. For one, an accounting system that examines the health sector as a whole (including public and private components and all levels) would be useful for allocating health resources. For another, strict controls on resource allocations within the health sector are required.

Political Dividends

A plea for larger allocations to the health sector (and

'health-producing' sectors) is based on the stipulation that investments in health while generally considered 'consumption investments,' are clearly also 'production investments.' Better health can improve national productivity, reduce population growth, improve "equity and social justice," and reduce suffering and 'wastage' of national resources through a reduction in untimely mortality. Attention to major health problems affecting the labour force (particularly women) and 'future labourers' (children) will result in a more productive population. Such achievements can, in turn, engender increased political returns. Just as sophisticated curative medical facilities have been developed in response to urban-elite 'demand' and have paid political dividends, so, too, will primary health care elicit political support from its special target groups. Their large numbers could amount to considerable political clout. Recent experience in Tamil Nadu and Andhra Pradesh, where nutrition schemes have been instrumental in capturing (in particular, women's) votes, has demonstrated the nexus between politics and social programmes. The provision of health care could also be viewed as an effective political strategy.

On the other hand, ambiguity in political will can generate official indifference—even hostility—towards the implementation of the health policy, hamper the mobilisation of resources, and stymie the reorientation of the health system. By the very nature of its Utopianism, the slogan and the strategy of primary health care can be interpreted in many ways, sometimes quite equivocally, by the government and other concerned agencies. Will the National Health Policy remain "an artificial facade behind which particular interests are continually promoted?" (Guhan, 1982). One must espouse hope rather than cynicism; and continuously judge the government's intentions *vis-à-vis* the Policy by the manner and extent of its implementation.

Annexure A

List of Voluntary Health Programmes Studied and Mode of Study*

Projects	(1)	(2)	(3)	(4)
I. *"Grassroot' Health and Development Agencies*				
1. Arpana Trust, Karnal, Haryana	×	×		
2. Banwasi Seva Ashram, Mirzapur, U.P.	×			×
3. Chetna-Vikas, Wardha, Maharashtra	×			×
4. Child in Need Institute, Calcutta	×	×	×	×
5. Deenabandhu Rural Life Centre, Chittoor, A.P.	×			×
6. Gram Nirman Mandal, Nawada, Bihar	×	×	×	
7. Comprehensive Rural Development Project, Jamkhed, Maharashtra	×	×	×	×
8. Kishore Bharati, Hoshangabad, M.P.	×			
9. Kottar Social Service Society, Nagercoil, Tamil Nadu	×			
10. Lokshiksha Parishad, Narendrapur, Calcutta	×			
11. Maharogi Sewa Samiti, Wardha, Maharashtra	×	×		
12. Mahiti-Utthan, Dhanduka Taluk, Gujarat	×		×	
13. Marianad Community Development Project, Trivandrum Distt, Kerala		×		
14. Comprehensive Health and Development Project, Pachod, Maharashtra	×			
15. PRAYAS, Chittorgarh, Rajasthan	×		×	×
16. Sewa Mandir, Udaipur Distt, Rajasthan	×			×

*(1) Literature review
(2) Field visit
(3) Discussions with Project Leader/Staff
(4) Conference or Seminar Presentation by Project person

17. SEWA-Rural, Zagadiya, Gujarat	×	×	×	
18. Social Work and Research Centre, Tilonia, Rajasthan	×		×	×
19. Tribhuvandas Foundation, Kaira Distt., Gujarat	×	×	×	
20. Apnalaya, Bombay	×	×	×	
21. Indo-Dutch Project for Child Welfare, Hyderabad	×		×	×
22. Mobile Creches, Delhi	×	×	×	
23. Streehitkarini, Bombay	×	×	×	
24. VIKAS, Ahmedabad	×	×	×	
II. *Hospital Community Health Outreach Schemes*				
25. Health for One Million Project, St. John's Hospital, Trivandrum Distt., Kerala	×		×	×
26. Holy Family Hospital, Bombay	×	×	×	×
27. Miraj Medical Centre. Maharashtra	×			
28. Naujhil Integrated Rural Project for Health and Development, Mathura, U.P.	×	×	×	×
29. Padhar Hospitals, Community Health and Development Project, Betul District, M.P.	×			×
30. Vadu-Budruk Health Project and KEM Rural Health Project, Pune	×	×	×	×
III. Special Service or Hospital-Based Projects				
31. Govel Trust Aravind Eye Hospital, Madurai	×	×	×	
32. Government Erskine/Rajaji Hospital, Madras	×	×	×	×
33. Kabliji Hospital, Haryana	×	×	×	
34. Sanjivini Mental Health Society, Delhi	×		×	
IV. Medical College or Research Institute Field Area or Project				
35. All India Institute of Medical Sciences, New Delhi (Ballabhgarh Centre)	×	×	×	×
36. B.J. Medical College, Pune (Sirur Taluk)	×	×	×	
37. Christian Medical College, Ludhiana (Sanewal block)	×		×	×
38. Grant Medical College, Bombay : Palghar-Kasa Integrated Maternal-Child Health Nutrition Project (Thane district)	×		×	×
39. Mahatma Gandhi Institute of Medical Sciences, Sewagram, Maharashtra	×	×	×	×

40. Mandwa-Uran Rural Health Projects, Foundation for Research in Community Health, Bombay	×	×	×	×
41. Medical College, Rohtak (Beri, Kathura and Chiri blocks)	×	×	×	×
42. Post-Graduate Institue of Medical Education and Research, Chandigarh (Raipur Rani block)	×		×	×
43. Rural Unit for Health and Social Affairs, Christian Medical College, Vellore, Tamil Nadu	×	×	×	×
V. Employee or Cooperative Schemes				
44. Comprehensive Labour Welfare Scheme, United Planters Association of South India, Coonoor	×		×	×
45. Mallur Health Cooperative, Bangalore	×		×	×
46. Self Employed Women's Association, Ahmedabad	×	×	×	
47. Voluntary Health Services, Madras	×		×	×
48. Working Women's Forum, Madras	×	×	×	×
VI. Alternative Government Models				
49. Cooperative Rural Dispensaries, Kerala	×			×
50. Rehbar-i-Sehat Scheme, Jammu & Kashmir	×			×
VII. Health Service Research Projects and Institutes				
51. Gandhigram Institute of Rural Health and Family Welfare, Tamil Nadu	×	×	×	×
52. Khanna Study, Punjab	×		×	×
53. Narangwal Project, Punjab	×		×	×
54. Project Poshak, Madhya Pradesh	×		×	×
VIII. Projects in other Developing Countries				
55. Bangladesh Rural Advancement Committee	×	×	×	
56. Gonoshastha Kendra, Bangladesh	×			
57. Savar People's Health Centre, Bangladesh	×			
58. BKKBN-Surabaya Project, Indonesia	×	×	×	
59. Yayasan Indonesia Sehajtera, Indonesia	×	×	×	×
60. Sarvodaya Shramdana Movement, Sri Lanka	×	×	×	×

Total : 59 Projects' literature reviewed
31 Projects visited
43 Project leaders/staff discussions
35 Projects' conference presentations heard.

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